

**CONSUMER'S EFFECTIVITY
IN
CHANGING INFORMATION TECHNOLOGICAL SCENERIO
AT
THE LIBRARIES OF THE STATE UNIVERSITIES IN U.P.**



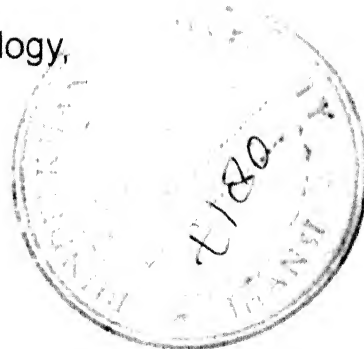
Thesis Submitted for the award of the Degree of
Doctor of Philosophy
in
Library and Information Science

Under the Supervision of
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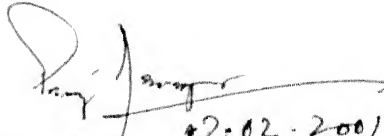
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CERTIFICATE


This is to certify that the work embodied in the thesis entitled *"Consumer's Effectivity in Changing Information Technological Scenario at the Libraries of the State Universities in U.P."* is submitted by **Shri Sanjeev Kumar Sharma** for the award of the degree of **Doctor of Philosophy** in Library & Information Science. It is a record of the bonafide research work carried by him under my supervision and guidance. This work has not been submitted else where for a degree/ diploma in any form.

It is further certified that he has worked with me for the period required under the Ph.D. degree, ordinance-7 of the Bundelkhand university, Jhansi.


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DECLARATION

I do hereby declare that the thesis entitled "*Consumer's Effectivity in Changing Information Technological Scenario at the Libraries of the State Universities in U.P.*" submitted to Bundelkhand University, Jhansi, has not previously formed the basis for the award of any degree, diploma or other similar title or recognition. This work embodies the result of my original research and reflects an advancement in this area.


(Sanjeev Kumar Sharma)

Date :

Place : *Jhansi*

ACKNOWLEDGEMENT

I Express my sincere thanks and privileged of deep sense of gratitude to my supervisor **Prof. M.T.M. Khan**, Department of Library and Information Science, Bundelkhand University, Jhansi for his Scholarly guidance, constructive suggestions, sustained interest and incessant encouragement during the entire period of this study that enable me to complete this Research Project.

I am highly thankful to **Prof. S. M. Tripathi, Dr. B. K. Sharma**, of Dr. B. R. Ambedkar University Agra, for their continuous Suggestion and encouragement during this period .

I acknowledge my thanks to all library **staff, Teachers** of Bundelkhand University, Jhansi and different University libraries in co-orperating me in collecting valuable data and information for this study, especially the librarian of Dr. B. R. Ambedkar University, Agra, Bundhkhand University , Jhansi, M.G. Khashi Vidhpeth, Vanarsi, Meerut University, Meerut etc.


I am also very much grateful to my **Director Dr. S.N. Kadam, Dr. N.N. Kadam** for their active encouragement and help to complect this work. It would be an error from my part if I fail to express my thank to my Principal **Prof B.D. Kulkarni** who was always motivated me to compete this work in time. I also wish on record my seincer thanks to **Dr. V. N. Pandy, Dr. R.K. Sharma, Prof S. Devane, Prof .U.V. Bhosale**, and my colleague.

I submit gratitude to my parents **Shri B.P. Sharma** (Father) and **smt. Ram shree devi** (Mother) who always motivated me to get higher education.

I am espeecially grateful to my wife **Rajani Sharma** my Sister in Law **Mrs. Manju Sharma** and her husband **K.D. Sharma**, and my loving daughter **Anu, Gauri**, my Bhabhiji Mrs **Dipti** and Mrs **Shashi Sharma** Who motivated whenever I fell depressed .

I am very really greatfully to my all brothers and Sister for their support to completed it.

I always pray to **Sri Sathya Sai Baba** the lord of Universe for his constant blessings to complete this research work


(Sanjeev Kumar Sharma)

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Chapter : One

Introduction

INTRODUCTION

The most important feature of modern times influencing development, International competition, etc. is that the rate of growth of information and knowledge is faster than ever before and is still accelerating. The world Famous futurist, Alvin Toffler calls twenty first century as, space age, computer age, information age and electronic era. Blaise Cronin describes the future society as Information Society and predicts about the Emergence of Information workers. These developments are the impact of the phenomenon known as Information Explosion.

Library is a service Institution. The services are aimed at meeting Consumer's needs. The needs varies with the category of consumers. Most of the University library professionals are faces with the aspect of librarianship and Information Science, between speedy Information retrieval and the leisurely pace of the most of the Consumers Information gathering habits. Most of the library and Information Science professional are still content with their passive work roles expected by the Academic Community, and do not seek major innovation, except the traditional concern for housing men and materials. Services are not aggressively offered as the sales managers do.

1.1 Consumer's Effectivity

The world is passing through a very fast Technological era, with a wide range of innovations revolutionizing the entire gamut of human activities. It is necessary to avail of this technological Explosion for raising the productivity and efficiency of the various sectors of our economy and generally for improving the quality of consumers lives. Consumers Effectivity undoubtedly constitutes the base for the building a prosperous and progressive library, and putting in place suitable infrastructure facilities is a pre-requisite for realizing this goal. In the field of education, such facilities includes libraries as a basic and essential component.

Now-a-days consumers Effectivity depends critically on acquiring the know-how for using a modern library to the best advantage. The quantitative expansion of libraries and the increased numbers of consumers are heartening but the qualitative aspect has not given proper attention, leading to a decline in the standard of library services. One of the basic problems faced by university libraries in Uttar Pradesh is the shortage of space, since most of the buildings came up many years ago and secondly the extension proposals did not materialize expeditiously to make their resources available to the library users despite of the fact that

the annual intake of books has tripled, the staff strength in most universities continues to be the same as in last decade.

1.2 Information Technology

Information technology is the broad term used to describe the many ways in which modern technology, usually in the form of computers, may be used today in university libraries. It relates to a wide variety of possible operations and tasks these machines perform, such as receiving, manipulating, and reproducing information and data, with a speed and accuracy only dreamed about a few years ago. Computers are now compact and very powerful. They are versatile, flexible and reliable, yet portable enough to be used just as effectively in the libraries as in other organization. The practical reality is that Consumers continue to need libraries and librarians must meet these needs with resources and technologies that are now available.

1.3 Statement Of Problem

There are twenty eight state University Libraries in Uttar Pradesh. The challenge before the state university libraries is to make their resources available. The flow of information and the use of information sources by

the consumers in the state University libraries in India are different from what may now exist in advanced countries like U.K. & USA. In addition, if the state university libraries want to build a high image with consumer's favour, they should have to know their characteristics, background and their information needs and information uses.

It has been observed that Information Technology if applied to and adopted by the state university libraries can help them in living up to the expectations and needs of the consumers. The problem proposed is studied under the present research project "*Consumer's Effectivity in Changing Information Technological Scenario at the Libraries of State Universities in Uttar Pradesh.*"

The concept of Consumers effectivity and Impact of Information Technology is studied under Management Science. The librarians of State University may need to know information seeking behaviour of information consumers and effective use of information due to impact of information technology.

1.4 Nature

This present study is essentially exploratory in nature. This may prompt many further studies of the problem. Therefore, the results computed from field data should not be construed to be absolutely conclusive. It is observed during the field survey that state university libraries in Uttar Pradesh are not well equipped with new information technology. However, it is observed that, these university libraries were interested in applying various Communication channels and new Information technology to fulfill Consumers needs.

1.5 Importance

The importance of present study is to (I) identify (ii) analyze and (iii) tracing the feasibility of application of information technology in university libraries and see the impact on consumers. This study will add to the body of knowledge concerning international librarianship and the use of information by the state university libraries. It is hoped that this study will encourage further research in this field to conduct other studies about "consumers Effectivity". In addition, the finding of this study can be used for comparative studies, and the research finding of this study can also be used as guide for other similar studies.

1.6 Need

The study may respond to the 'consumers awareness and Effectivity' of the University libraries. It is essential that University libraries should project a positive and dynamic image through use Information technology. University libraries should ensure better services and relations with each of the library community and promote its use. The libraries being a Service-oriented organization, the Consumers need must be match with the perception of users for effective results. Libraries must be highly regarded and seen to be integral to the aim of university of which they are the key part. Consumers-Oriented Information is characterized by the belief that library user can be motivated to use any product if they exposed their products or services. Most of university librarians now recognized that 'customers' must be made aware of the range of available products and services and must further be made to feel that such offerings are worthwhile.¹

¹ Wood, E.J. Strategic Marketing for Libraries: A Handbook. Greenwood Press, New York, 1988, p.4

1.7 Objectives

The objectives of this study are

- i. To understand the attitudes of university librarians towards information consumers;
- ii. To define the role of Information Technology for improvement of library and information services.
- iii. To develop awareness among the university libraries those consumers' relations provides a clear understanding of users relations.
- iv. To suggest suitable guidelines to improve consumers relations and marketing of information in State University Libraries.

1.8 Scope

No study has been done for the state university libraries in respect of Consumers Effectivity and Impact of Information Technology. The scope of present research work is confined to state university libraries in Uttar Pradesh funded by State Government. In all 577 samples were collected from library users and 150 samples were collected from library staff from nine State University Libraries Viz. R.M.L. Avadh University, University of Lucknow, Lucknow, Gorakhpur University, M.G. Kashi Vidhyapeeth, Varanasi, Sampurnanad Sanskrit Visvavidyalaya, Varanasi, SSM

University, Kanpur, Dr.Bhim Rao Ambedkar University, Agra, Chaudhry Charan Singh University, Meerut and Bundelkhand University, Jhansi.

1.9 Review Of Related Studies

1.9.1 User Education

Kumbar (1998) reveals that user education is mainly concerned with providing guidance and instruction to the user in the proper use of library collections, individually or collectively; mentions the difference between user education, orientation and initiation, and emphasizes the need for user education in the libraries; Provides objectives and methods of user education. Though many institutions, universities and associations in India have organized seminars and conferences on the topic in the necessary infrastructure and innovation of suitable library instruction methods to suit the Indian conditions they are yet to be developed. Therefore it is the duty of the profession to develop such teaching aids, which are suitable to meet the Indian requirements. It has become more urgent due to the heavy use of advanced technologies in libraries and information centers.

Fidzani (1998) reported a result of questionnaire survey to determine the use of library resources by users (graduate) at Botswana University. Empirical data was collected from **144** of **223** users registered for 1996-97

academic year. Results indicated that guidance in the use of library resources and services is necessary to help students to meet some of their information requirements. The Concludes that user training is needed to enable users to make maximum use of the library. The author may be contacted by electronic mail at fidzanib@noka.ub.bw.

Lwehabura (1999) emphasizes the importance of user education in the libraries of academic institutions and the need for comprehensive and systematic user education programmes in African universities and at the roles of the university administration and teaching and library staff in making these programmes effective. Offers proposal for developing a user education programme stressing the need for it to be an integrated component of the university curriculum.

Lohia (1999) stressed on a number of methodologies for the optimum use & promotions of library services, which benefits the library users in great extents. Suggestions for users attention and attraction through: oral presentations, demonstrations diskettes, promotional film or video, leaflet or brochure, promotional mailing, bulletin board, newsletter, news release, displays, public services announcement on radio/T.V., computer Network, Internet etc.

Tiefel (1995) examines the place of library user training in the future of libraries. To counter the popular belief that libraries would be more effectivity concentrating their resources elsewhere argues that, to put library users training in perspective requires a look at its past and the status of programmes in term of contents, impact, and limitations.

Barrett (1995) reviews the types of user training techniques commonly used in academic libraries and notes the various factors that contribute to the success or otherwise of user training strategies, including: the importance of planning; and the involvement of academic teaching staff. Direct instruction methods, includes tours of the library; lectures and demonstrations; and audiovisual technologies. Some direct teaching methods include practice sessions; workbooks; computer-assisted instruction; and one to one instructions. Concludes with methods of indirect and mixed technique instruction. Discusses ways of deciding which methods to the use.

Chandler (1994) analyzes how user centered approach to system design addresses the representational and strategic issues that arise when developing a particular artificial intelligence based system, the Science

Education Advisor (**SCIED**). SCIED is case based hypertext browsing system designed to collect and dispense ideas and advice user centered approach.

Bergman (1992) reports on a questionnaire survey of **125** randomly selected special libraries conducted by the library instruction round table research committee of the ALA in 1988 to determine the purpose and character of library instruction in US Libraries. Findings shows that: the most significant purpose of instruction is to encourage more effective use of the library; that most libraries conducted some sort of individual instruction; that enabling people to refine and articulate information needs is the most important conceptual aspect of library instruction; and that interest is high for exchanging library instruction materials.

Singh (1991) describes user education, its need in libraries and information centers. Traces the beginnings of the user education in general as well as in India. Takes into account the various terms, which have been accepted. Discusses the various developments that have taken place in the field of user education, particularly in the context of computerized information retrieval. Also describes the Indian scenerio this context. although literature on User education are available, there is hardly any

literature on User education is experiences in user education for computerized information retrieval in India.

Shibukawa (1978) mentioned, there is increasing evidence that fewer and fewer library users in colleges and universities are really availing to cope with the complexity of bibliographic systems in modern academic libraries. Emphasizes the importance of practical library user education and briefly reviews studies of user education in the USA.

Ping and Ping (1990) mentioned recently user education in academic libraries in China has rapidly developed with support and encouragement from the Chinese government. Provides a brief view of Chinese higher education and methods of developing bibliographic instruction in Chinese academic libraries. Also discussed are issues related to: cooperation between instructor and librarians, development of teaching materials, and some barriers which may prevent growth in future user education programmes, as well as comments concerning solutions to these barriers.

Luke (1989) stressed that microforms present unique problems for the user. They are difficult to access through traditional bibliographic means and require special equipment. Concludes that the best way to ensure that

users get the most benefit from microforms collections is for libraries to provide them with comprehensive training in using the medium.

Frank (1988) describes the educational system at the Technical University of Budapest and focuses on the development of user education. Observations on the subject of the efficiency of user education include: its dependence on the motivation of the users; the expectations of teachers and the nature of special fields; and the quality of bibliographic citations and references in Hungarian and foreign dissertations.

Green (1989) reveals that in response to a need for a high level of familiarity with the major sources of information in engineering disciplines and increased use of library materials for project work in new degree courses, lecture programmes were developed for the 4 engineering departments in the Edward Boyle Library of Leeds University concentrating on serials literature. These programmes are discussed in the context of the whole user education programme.

Agrawal (1984) discusses the scope of user education and the value, methodology and assessment of user education programmes. Describes international and Indian developments in user education. Proposes the

formation of a national policy on user education and a national agency to administer its programmes.

Khandwala (1983) reports that to suit the requirements of readers-students at different levels and teaching staff, the S.N.D.T Women's University (Bombay) library arranges different user education programme with 3 basic goals: orientation to the library, bibliographic instruction and creating general awareness and appreciation of books. The programmes include basic level and detailed orientation, special invitation programmes, formal courses, informal guidance and library exhibitions and projects. Full staff participation is achieved and user education programmes are arranged in four languages. The practical /demonstration methods are used most frequently to increase user involvement. To improve teaching skills, work is distributed among small staff teams. The subject of interest and its bibliographic structure, user awareness, teaching/evaluation methods, library resources, teaching skills of library staff and suitability of the chosen programmes all affect the quality of the user education programme.

Gunjal and Asundi (1984) explain the concept 'user education' and its significance in library work. Discusses the various components of user

education, which included the user, information, objectives, techniques, and programmes. Examines programmes and documents to train users and refers to the norms given in UNISIST Manual and the manual of the UK Library Association (LA). Specifies the importance of user education in information work particularly with the availability of sophisticated tools such as microprocessors and minicomputers.

1.9.2 Impact of Information Technology

Information - its creation, storage, retrieval and dissemination - is central to the functioning of large research oriented state university. It is the university library that has performed this particular function. Innovations in technology are affecting the methods of collecting, storing, communicating and displaying information. If the university library is to discharge its function effectively and efficient service to its users it must adopt the modern techniques of information handling by taking resource to the application of new 'Information Technology' and some of the basic issues involved in the application of modern information technologies in state university libraries in Uttar Pradesh. The challenges that libraries have to face in this regard have also been indicated. Some of these could be :-

1. The conversion of the catalogues , which are in the card form in most of the state university libraries in Uttar Pradesh,
2. Strengthening and providing for the growth of traditional library collections and services, while attempting to develop its capacity to provide access to information resources available elsewhere, both in traditional and electronic forms.

Legge (1998) reveals the prospects for the greater use of library users education the Internet and World Web, and alternative ways in which the sharing of resources could take place in this new environment. Suggests that most of the problems encountered in past efforts at users caution resources sharing could be overcome if the resources were Web based.

Sambasivan (1999) discusses the problems faced by reference librarians when global Information Technology is undergoing so vast and speedy a transition. Looks at the shifts in emphasis, nature and approach in the questions now posed by library users who are aware of the resources available on CD-ROM and the Internet.

Kumar (1994) mentioned the various facets of library automation. He considers the benign and malignant effects of Information Technology (IT)

and examines in detail the likely impact of IT on Indian society and the preparations India has to make to reap the maximum benefits from it.

Rhodes and Chelin (2000) report results of a questionnaire survey, carried out during 1998, to investigate the use of the World Wide Web for user education in 68 UK University libraries. Almost three-quarters of the libraries surveyed make use of the Web for this purpose. The Web is used as a supplement to existing user education, in order to support independent users centered learning and to reach part-time and distance learners. Just 10% of user education are delivered solely via the Web, but libraries indicated that use would grow in the future. It was found that greater use is made of the Web for information skills training than for library induction. The author suggested a number of reasons why more use is not being made of the Web for user education and proposes future developments in this area. He mentioned that web based instruction is unlikely to replace traditional methods completely, but it can be used to supplement and extend existing provisions. The authors may be contacted by electronic mail at **Rhodes_Helen@hotmail.com** and **Jacqueline.Chelin@uwe.ac.uk**.

Schmidmaier (1991) defines the role and function of library user education in the specific applications of online user education; CD-ROM user education; and corporate assisted instruction.

Fjallbrant (1990) examines some of the effects of Information Technology as applied to user education at several levels: orientation for new library users; for undergraduate students and courses for academic staff. Particular emphasis is given to library catalogues, bibliographic databases, videotext, optical information storage, electronic publishing and electronic mail.

Collins (1989) describes the methodology and outcomes of an experiment to examine the difficulties novice users encountered when searching the ERIC database on CD-ROM at the South Australian College of Advanced Education Library.

Studer (1986) presenting a paper at Annual Meeting of the Bibliographic Instruction Section of the Association of College and Research Libraries of the ALA during its annual conference in Chicago 9 July 1985. Reveals that it should be easier today to obtain money from the University administration for the purpose of user education because of the widely

held belief that computerization of campuses is desirable. Reasons for chaining of an on-line catalogue should also be explained to campus community. In the transition, 'gradualism' is the preferred approach with the card catalogue fully maintained and users free to use public terminals. Describes prerequisites for the introduction of an on-line system. Emphasizes that in user education both library staff and users must be educated about the system.

Nakhimoff (1986) report of a Council of Polytechnic Librarians (COPOL) seminar on information technology and user education held in London, UK on 25 March 1986. Paper covered: microcomputers and user education; a technology update; computer-aided learning and interactive video.

1.10 Hypothesis

- i. Information Technology has been largely effected the consumer's information seeking behaviour.
- ii. Systematic use of Information Technology / Electronic Media, greatly improves the university library services;
- iii. Marketing of information promote the use of information in state university libraries.

- iv. There is a need to provide in-house training facilities for the staff in modern information handling & techniques;
- v. There is need to develop the capacity of the university libraries to deal with large quantities of information in variety of new forms;
- vi. There is need to convince the authorities to make investments to add electronic dimension to state university libraries to keep pace with new information technology and the changing needs of users.

1.11 Methodology

As per the objectives, the hypothesis, the nature and scope of this study, explained in the preceding paragraphs, the present study is concerned primarily with collecting details of factual information on 'Consumers Effectivity due to new Information Technology with special reference to State University Libraries of Uttar Pradesh. Thrust has been to investigate the Impact of Information Technology and Computer in State university libraries. For this purpose review of literature was done to find out the contribution in this subject. Therefore, to collect the required factual data following techniques have been used. To collect data on (i) the existing situation and practices in university libraries and the future planning with regard to the Information Technology (ii) to know 'users effectiveness' due to induction of new information Technology. The

Users Survey was divided into section and sub-sections, which contained variables describing the nature of library, their users community, the library activities, their financial resources, their collection, years of establishment use of information technology by them (ii) which contained variables describing the kinds of library services offered, whether manually or with the help of taken form computers. The data has been collected from 577 library users of various disciplines which form 80% of response to the questionnaire circulated, and 150 library staff of different university libraries which form 85% of response to the questionnaire circulated, and through personal visits and personal interviews from the university librarians and specific library users has been analyzed and interpreted.1. Library Survey 2. Users Survey.

The data and information thus collected has been examined with special reference to impact of information technology, consumers relation and their information seeking behaviour.

A description of the methodology used to collect the data, and the statistical techniques used for the analysis are presented below: For the purpose of this study, following methods have been used.

- I. A thorough literature search was conducted to examine the findings of the earlier relevant studies and to establish a theoretical framework for this study.
- II. Both methods have been used to collect information 'Manual' as well as 'Electronic' form through CD-ROM & use of LISA Search.
- III. Secondary sources of data were used to collect information for present study by historical methods.
- IV. Field visits to some of state university libraries in Uttar Pradesh to know the prevailing conditions;
- V. Dispatch of questionnaires to collect data from other State University libraries in Uttar Pradesh
 - a. General information about library services, staff and operations
 - b. Present status of consumers relation (CR) and
 - c. Use of Information Technology.

The questionnaire in this study have been used as main instruments, because 'a questionnaire is the principal means used to learn about what is happening in 'our' libraries and how people are responding to them'²

² Bookstein A. Questionnaire Research in Library Setting. "The Journal of Academic Librarianship" V.11, 1985.

1.12 Summary of Chapters

The whole thesis is divided into eight chapters, numbered as Chapter- 1 to 7. The chapters are further divided into sections and sub-sections, numbered using decimal fraction notation. The content of the chapters are summarized as follows:

Chapter-1 is an introduction of this research study. After giving general background, it introduces 'Consumers Relation' and 'Information Technology'; explains the problem being studied; pronounces the importance, need, objectives, and overview of related study and research strategy of the present study. It has been explained that the study finally confines to the findings of the two filed survey of 9 state university libraries located in Uttar Pradesh and 150 library professionals of these university libraries.

Chapter-2 described the 'University Libraries An Introduction; its objectives; functions, importance of university libraries; and historical developments. Presently there are 28 State University Libraries in U.P. In the state of Uttar Pradesh there were initially three Universities. Among these two were Central Universities, namely, the Aligarh Muslim University and the Banaras Hindu University, and other one was State

University, namely Allahabad University. In 1950-51 there were only six Universities and 40-degree colleges providing higher education in the state.

Chapter-3 explains the meaning of 'Information Technology; its origin and historical development; importance of I.T. for university library. It has been described that the scope of modern Information Technology relations is sufficiently broad for the university library. In university library IT has been, from the beginning, a way of providing speedy library services to its consumers. It continues to receive emphasis; otherwise the library would quickly lose its effectiveness. A wide variety of advantages can be derived by the appropriate use of Information Technology. The advantage of Information Technology can refer to anything useful produced with the assistance of technology, which allows completing more tasks with greater accuracy and better quality in less time and for lower costs. It could be higher productivity, better quality or it might be less tangible like ensuring consumers to have a better image of the library, improved response time or improving staff morale and motivation. In certain nature of jobs, hours of manual work are possible for completion within minutes through Information Technology.

Chapter-4 this chapter explains the concept of marketing of information.

It has been described that though 'marketing' is a business term, it has found a befitting term 'information marketing' in university libraries. The university library products and services equally fit into marketable commodities, as any other commodity being marketed by any business enterprise. It is observed if the concept of information marketing is properly understood, adopted and practiced, it may prepare university libraries, to provide much better information products and services to give maximum satisfaction to the users.

Chapter-5 describes the 'consumers care and Effectivity, concept of consumers, The 'Potential User' The 'Expected User' The 'Actual User' 'Beneficiary' Information Consumer, needs of consumers, consumers-focus approach, consumers profiles, consumers groups, consumers-oriented services, quality of library services, and consumers care and libraries. Till recently consumers care was considered as a synonym to after sale service. But in the recent past it has grown in dimension and today got the status of a library services tool to assure operational efficiency and 'consumers satisfaction' by ensuring that products and services reach the consumers on the right time in right quantities and specifications.

Chapter-6 is based on the evaluation of data collected after surveying the 9 State University Libraries of Uttar Pradesh. The data was collected from 577 library users and 150 library professionals out of 100 questionnaires to each university. The observations drawn after data was analyzed and interpreted have been given in this Chapter.

Chapter-7: is containing a summary of 'Observation & discussion.' In order to test the formulated hypothesis the findings present the analytical study of the data reported in the previous chapter has been discussed in this chapter in the light of the relevant theoretical models, the researches. The finding reveals that the most of the hypothesis of the present study have happen as well as found not to be defended.

Chapter-8 is containing 'Recommendations & Conclusion' formulated during the course of present study.

Chapter : Two

University Libraries: An Introduction

UNIVERSITY LIBRARIES : An introduction

Man created society for his own sake and it is an internal truth that no man can live without a society, because man is an intellectual social animal. Living in society, he has got his own social status. He is progressive, his progress is due to certain social activities, and one of them is language. Language is the only media to understand each other. Thinking is the most natural activity of a man. He thinks in language, expresses his thinking in language and communicates himself with other through language. Knowledge was given by man to man through a spoken language. There were hardships in keeping the spoken language for permanent use. Therefore man found the script and expressed his thought with the help of written language. In the past man recorded his thought, to preserve the knowledge on Bhojpatra, Tamra Patra etc. and later on it was recorded on clothes. By the course of time man invented paper and thus revolutionary changes took place. The written language became more communicable media to exchange knowledge in the society. Ultimately books were published in various branches of knowledge and it eventually put a problem for an individual to read every thing published.

It was really a problem to preserve all the books. This gave birth to the idea of library. Library means place where books and other written documents are stored libraries are the foundation of knowledge.

Library is more important than any other thing in the society, because people learn through it, know through it and move the wheel of knowledge through it. Libraries are just like lighthouse towers, which give guidance to whole of society and thus, the role of libraries in the development in the education is very vital. Now the library has become an indispensable part of our social life for the development of educational, social and cultural activities. A modern library is a social institution.

In the words of Dr. **S.R. Ranganathan** "Libraries are not mere the storehouses, they are rich springs where knowledge flows out which irrigate the wide field of education and culture".

2.1 University Education In INDIA

India has been the cradle of one of the earliest civilizations in the world. There is, in fact, 'no country where love of learning has so early an origin or has exercised so lasting an influence. The importance of libraries in academic institutions was, therefore, recognized in India even in the

remote past. In the Vedic Age instructions were imparted orally, without the medium of books, and this is perhaps the reason that no libraries have so far been discovered in the archaeological excavation at Tazil though it was a famous seat of learning from 700 BC to 300 AD. With the advent of Buddhism, teaching came to be practiced through written word and this in turn gave rise to libraries. **Fahien** noticed such libraries at Jetavana Monastery at Srasvasti (U.P.). The Nalanda University in Bihar (300-850 AD) had a huge library complex known as Dharmaganj. Jagaddal, Kanheri, Mithila, Odantapuri, Somapuri, Ujjan, Vallabh, and Vikramsila were the other seats of learning which had good collections of manuscripts in the libraries attached to them. All these libraries were destroyed at one time or the other by fire or Mugal Emperor, often in ignorance.

2.1.1 Medieval Period

The existence of academic libraries during the medieval period of Indian history is not known, though the Muslim rulers did patronize libraries in their own palaces. A lone exception, however, was a library attached to a college at Bidar, having a collection 3,000 books on different subjects. **Aurangzed** got this library transferred to Delhi to merge it with his palace library.

2.1.2 British Period

During the British period a considerable number of English and oriental colleges both Government and private were established. These institutions are quite different from the colleges of today. Government of Bengal (1845) proposed the establishment of Central University at Calcutta on the pattern of London University. This proposal was not accepted. Later on in 1854 on the recommendations of the " **Wood's Dispatch** " the Government of India decided to introduce higher education for the native Indians. This was the beginning of higher education era in India. The Government of India then decided to establish three Universities in three major metropolitan cities in India on the line of London University. Thus in 1857 three Universities were established in India. They are as follows:

(i) *Calcutta*

(ii) *Madras*

(iii) *Bombay*

During the years 1855 to 1902 there was a great progress in respect of College education in India. In this period about 191 colleges were established. During the period of Lord Curzon who was the Viceroy of British India, the Indian University commission was appointed, which has augmented the growth of University commission was directed "to inquire

into the condition and prospects of the Universities established in British India."

The recommendations of the act were embodied in the Indian University Act of 1904. Curzon's reforms for expansion of university education continued for ten years. During this period a number of colleges increased and enrolment of student the existing Universities increased. The demand for higher education was continuously increasing and that's why Lord Hardinge's Government surveyed the position and passed the resolution in 1913. Through resolution the Government disclosed its intention to established Universities in India and expressed its desire to improve teaching facilities in the existing Universities. It advanced higher study and created an atmosphere conducive to social and moral as well as intellectual progress. In presence of the above policy the following Universities were established to meet the prevailing demand.

1. Banaras Hindu University (1916)
2. Mysore University (1916)
3. S.N.D.T Women's University (1916)
4. Patna University (1917)
5. Osmania University (1918)

These universities were just like state Universities. There was a continuous movement for establishing regional universities at Decca, Poona, and Ahamdabad within the jurisdiction of parent Universities. As a result some new Universities were established.

In the history of progress of Indian education appointment of Calcutta University Commission has a very important place. It is also known as Indian Education Commission. Indian Education Commission and its recommendations advanced the progress of education. In 1875 there were only three Universities, which grown up to 22 Universities in 1946.

In our country higher education is given by University and Colleges. The primary aim of University & College education is to cater the need of those, who are interested in higher education and those who want to spread their knowledge within the interest of nation and society. A university and College mainly stands for higher learning and research.

“According to dictionary of Education” A University is and institution of higher education which has a liberal act colleges; offering a programme of graduate study have usually two or more professional faculties; and it is empowered to confer degrees in various fields of study”.

It means a University must have more than one postgraduate course, it must provide the degrees in more than one subject and doctoral degrees in various disciplines. Late Prime Minister of India, Pandit Jawaharlal Nehru, while addressing the convocation at the University of Allahabad in 1947 remarked.

“A University stands for Humanism, for tolerance, for reason, for adventure of ideas and for the search of truth.”

According to Daugherty and Blauch, “A University in the United States is an educational Institution comprising under graduate colleges of liberal arts and sciences, professional schools and a graduate college of school, which provides programmes for study and research beyond the levels of accelerate and first professional degrees.”

2.2 Purpose

“The basic purpose of education is to create more efficient and productive citizens aware of our glorious national heritage and the noble achievements of human civilization, possessing a basic scientific outlook and committed to the ideals of patriotism, democracy, secularism,

socialism and peace, and the principles enunciated in the preamble of our constitution.”

“Higher education has to produce capable leaders of society and economy for manifold activities committed to the aforesaid ideas. Higher education is being integrally linked with the entire educational structure. Higher education should take note of academic excellence; progress of arts and science should take note of academic excellence, progress of arts and science the entire world over and ensure that our best talents make befitting contribution this international endeavour. **Wilson and Tauber** suggested purpose of higher education as:

- Conservation of knowledge
- Teaching
- Research
- Publication
- Extension
- Interpretation

Kern Alexander mentioned the following purpose of higher education as under:

1. To maintain, support, critically examine and to enforce the existing social and political system.
2. To train students and faculty leadership and superior service in public service science, agriculture, commerce and industry.
3. To develop students to well rounded maturity –physically, socially, emotionally, spiritually, intellectually and vocationally.
4. To develop, refine and teach ethical and cultural values.
5. To provide fullest possible realization of democracy in every phase of living.
6. To teach principles of patriotism civic obligation and respect for the law.
7. To teach the practice of excellence in thought, behaviour & performance.
8. To develop, cultivate and stimulate the use of imagination
9. To stimulate reasoning and critical faculties of students to encourage there use in improvement of existing political and order.
10. To provide by study and research for increasing knowledge.
11. To provide by study and research for development and improvement of technology, production and distribution of increased national goods.

12. To provide directly and explicitly international understanding and cooperation
13. To transfer the wealth of knowledge and tradition from one generation to another.

2.3 After Independence

The modern trend of education is to develop a thinking individual who should prove to a self-relevant person in every walk of life, yet the impact of higher education is so vital on the national life of country. After independence wonder progress in higher education through universities has taken place. The Universities education system finds its guiding principles for high standard of general, vocational and professional education. However, after independence the function of University education shows definite slant towards its local problem and needs.

The Government of India appointed the University Education Commission (1948-49) under the Chairmanship of **Dr. S. Radhakrishnan**, an eminent educationists "To study the existing educational facilities available in Indian University. And to suggest improvements to suit the future requirement of country. The Commission gave many recommendations for promoting higher education.

According to the "Commission" the objectives and aims of higher education are as under

1. Great changes have taken place in the political and economic conditions of Indian Society .The academic problems have assumed new shapes. We have now wider conception of duties and responsibilities of universities. They have to provide leadership in politics, administration, profession, industry and commerce.
2. Universities should be organs of civilization. They should train the intellectual pioneers of civilization.
3. If we want to retain the dynamics of cultural life, we must give up worshipping the past. We should think that nothing is done while anything aims to do. Hence the aim of University Education should be to promote intellectual adventures.
4. Universities should produce such wise persons who make an incessant research for new knowledge and unceasing efforts to plum the meaning of life.
5. The content of education must accept the best of what modern advancement has to offer, but without neglecting our cultural heritage from the past.

6. One of the main functions of Universities is to bring about the spiritual development of students.
7. Universities preserve the culture and civilization of country. If we want to civilize we should sympathies with the poor, respect woman, love peace and independence and hate tyranny and injustice. The aim of University education should be to infuse these ideals into the youth.
8. Aim of education is to discover the innate qualities of person and to develop them through training. Universities should discharge both these duties towards their students.
9. Healthy mind is found in a healthy body. Hence in the Universities attention should be paid not to the mental but also to the physical development of students.
10. Literature deepen and enlarge the human feeling. Hence, University should give most important place to mother- tongue in general education.
11. We are engaged in a quest for democracy through the realization of justice and liberty, equality and fraternity. Hence, it is necessary that our Universities should be emblems and protectors of these ideals.

Kothari Commission was appointed by the Government of India in (1964-

66) Under the Chairmanship of **Dr. D.S. Kothari** to evaluate the entire condition of education and so also the libraries. The recommendations made by the Commission are as under:

1. To seek and cultivate new knowledge, to engage vigorously and fearlessly in the pursuit of truth and to interpret the old knowledge and beliefs in the light of new needs and discoveries.
2. To provide the right kind of leadership in all walks of life to identify gifted youth and help them to develop their potential to the fully by cultivating physical fitness, developing the power of the mind and cultivating tight interests, attitudes and moral and intellectual values.
3. To provide society with competent men and women trained in agriculture, arts, medicine, science and technology and various other professions, who will also be cultivated individuals with a sense of social purpose?
4. To strive to promote quality and social justice and to reduce social and cultural differences through diffusion of education and;

5. To foster in the teachers and students and through them is society generally; the attitude values needed for developing the “ good life” in individual and society.

In addition to these broad aims which they share in common will all the universities, Indian Universities will have to shoulder some special responsibilities in the present state of our social and educational development for instance:

1. They must learn to serve as the conscience of the nation and from this point view they should encourage individuality, variety and within a climate of tolerance.
2. They should develop programme of adult education in a big way and to that and involve a wide spread network of part -time and correspondence courses.
3. They should assist the schools in their attempts of qualitative self-improvement.
4. They should shake off the heavy load of this early tradition which gives a prominent place to examinations and strive to improve standards all round by a symbiotic development of teaching and research, and

5. They should create atleast a few centers which would be comparable to those of this type in any other part of world and thus help bring back the center of gravity or Indian Academic life within the county itself.

2.4 University Libraries

The University library plays a vital part in the sphere of higher education. The University library has been termed as 'heart of university'. It has also been compared to the innermost sanctum of the temple. The university is designated as the temple of learning. The university library is a part of super structure of the university is designated as the temple of learning. It is there to help the university to achieve its goals. Hence the goals of university can be taken as 'criteria' of appraisal and reappraisal of the organization effectiveness and efficiency of university library.

2.5 Role of University Library

A university library's role is much more important in higher education. It would be an exaggeration to say that a library is an essential prerequisite for successful implementation of aims and objectives of higher education. The prime necessity for a University is a good library with balanced and adequate collection, which can satisfy the needs of University faculties

and students; help to promote advanced study and research programmes. A University is rated largely by its library. No University can develop effective work in the academic sense without a strong library as its center.

In the words of **S.R. Dongerkery** "A well stocked and up-to-date library is a *sin quo non* for every modern university." It is the central workshop of the university which provides the students, the teachers, the scholars and the research workers with the tool required for the advancement as well acquisition of knowledge. What the laboratory is to the research worker in branches of experimental sciences, the library is to the worker in the fields of humanities and social sciences.

2.6 *Function*

The basic function of University libraries is to aid the parent institution in carrying out its objectives. University libraries should be designed to support the role, which has been assumed by or assigned to the university. The library contributes to the realization of the objectives and supports the total programme by acquiring and making available the books, materials and services that are needed. In carrying out its responsibilities effectively, the University library performs certain activities. It acquires books and other reading materials, it prepares these materials for the use of students.

Faculty and others who acquire them, it circulates materials to clientele, borrows and lends materials on inter-library loan, it renders reference service, it provides bibliographical and documentation services, it gives instruction the use of library and encourages students to develop life long habits of good reading, it provides adequate and comfortable physical facilities for study, and it interprets library services to the administration faculty and students.

Wilson and Tauber describe the function of University library as "University Library directs its activities towards the fulfillment of the university which are as follows –conversation of knowledge and ideas, teaching research publication, extension of services and interpretation of research." The library exists not merely to help the instructional function at the university; it does also a good deal in aid of research, which is another major function of the university. The university library serves as a vital link in the chain between research and practice. It remains the center of all academic activities of the university.

M.B. Line is of the opinion, "the function of the University library is to bring together information or knowledge on the one hand, and human beings on the other." Every education advance depends upon its resources

and in the large measure, the degree of advance is proportionate to the potential of the library to respond. A quality education is impossible without a good library. A well-equipped and well-managed library is the foundation of modern education structure. Education in the absence of library service is like a body without a soul. The fundamental role of the library is educational. The university library should be operated as a dynamic instrument of education. The teaching and research function of university library contrasted with library housekeeping function results in the maximum attainment of educational objectives of the university.

Kothari Education Commission in its Report clearly defines the functions of the university libraries in order to realize the objectives of university education as under:

- I. To provide resources necessary for research in fields of special interest to university.
- II. Aid to the University in keeping abreast of development in his field.
- III. Provides library facilities and services secondary success of all formal programmes of instructions.
- IV. Opens the doors to the wide field of books that lie beyond the borders of one's own field of specialization, and

- V. To bring books, students and scholars together under conditions, which encourage reading for, pleasure, self-discovery, personal growth and sharpening of intellectual curiosity.

The commission emphasized the need and importance of University libraries and suggested that each University should develop a well-equipped library in accordance with the needs of its, users. Some of the recommendations made by the commission are worth mentioning.

- I. A new University, College or department should not be set up without taking into account its library in terms of staff, books, journals and space etc. Nothing could be more damaging to a growing department than to neglect its library or to give it a low priority. On the contrary the library should be an important center of attraction on the college or University.
- II. A collection of books, even a collection of good books does not constitute a library, enthusiastic teachers, who teach with books and librarians who can cooperate with them with in converting the library into an intellectual workshop, even a comparatively small collection of sensitively chosen books may work wonders in the life

of students, without such a staff, the most luxurious building or expensive books collection may no effect at all.

2.7 Development of University Libraries

The library is the best agency in the University for collecting organizing, and for providing the services to user in effective way. Before 20th Century only two University libraries were established in i.e. Bombay, (1864), Calcutta (1873) and later on Madras University was established its library in 1911. The notable attempts made by the government of India were the Indian Universities commission (1902), The Indian University Act (1904), Government of India Resolution of Education policy (1913). The Calcutta University Commission (1917-1919) recommended that "It is right to provide great libraries and great laboratories of research scholars to direct them in accelerating the research activities."

After independence in India, Commission after commission have emphasized the importance of libraries in higher Education. Government of India established university Grants Commission. Its committee on University and College Libraries (1957) made a detailed study about the working of University libraries in India. Today in India almost all universities have their libraries. At present there are more than 162

University Libraries in India, this reveals the changing scenario of higher education in India which is still in the secondary stage and preparing to step in 21st century.

2.7.1 User's Perspective

To compare the facilities available in Indian University Libraries with the libraries of other advanced countries like U.K. & U.S.A., some of the libraries in India are computerizing the catalogues of their stocks. For instance, libraries in the advanced countries have been linked through LAN and other Networks, through which any library users in any participating library can, through the computer terminals in the library, obtain information about the journals, newspapers and books available in any library. No such network has yet been instituted in state university libraries in Uttar Pradesh. In the current situation, such a network is vitally necessary. As a consequence of the current economic crisis, central funding agency for universities in real terms have reduced the budget. Since it is impossible for all libraries to afford the purchase of all-relevant books and journals, a mechanism at the state level need to be created to provide the funds for special activities from some specializations within the library system.

2.8 University Libraries in UTTAR PRADESH

In the state of Uttar Pradesh there were initially three Universities. Among these two were Central Universities, namely, the Aligarh Muslim University and the Banaras Hindu University, and other one was State University, namely Allahabad University. In 1950-51 there were only six Universities and forty-degree colleges providing higher education in the state. The table below indicates the year of establishment and numbers of universities.

Table-1

YEAR	NOS. OF UNIVERSITY
1881	1
1921	5
1941	6
1961	12
1981	23
1991	24
1995	28

The Table-1 & 2 shows that there is wonderful progress in the establishment of Universities. Now there are 28 Universities in Uttar Pradesh out of total 216 Universities in India.

Table-2**University Education in Uttar Pradesh**

S.No.	Name Of University, Place	Year of Est.
1.	Dr. B.R.A. University, Agra	1927
2.	Aligarh Muslim University, Aligarh	1920
3.	University of Allahabad, Allahabad	1887
4.	Banares Hindu University, Vanarasi	1916
5.	Dr. Bhim Rao Ambedkar University, Lucknow	1996
6.	Bundelkhand University, Jhansi	1975
7.	D.E.I. Dayalbagh, Agra	1981
8.	H.N.B. University, Garhwal	1973
9.	Gorakhpur University, Gorakhpur	1957
10.	G.B. Pant University, Pant Nagar	1960
11.	Gurukul Kangri Vishvvidyalaya, Haridwar	1960
12.	S.S.M. University, Kanpur	1966
13.	Kashi Vidhyapith, Vanarasi	1921
14.	Kumaun University, Nainital	1973
15.	Lucknow university, Lucknow	1921
16.	C.C.S. University, Meerut	1966
17.	N.D. University, Faizabad	1975
18.	Purvanchal University, Jaunpur	1987
19.	R.M.L. University, Faizabad	1975
20.	Rohilkhand University, Bareilly	1975
21.	Roorkey university, Roorkey	1949
22.	S.S. Vishvividhyalaya	1991

Initially, the University of Allahabad after its foundation was continued to concern with examinations only. There was no teaching activities except in the School of Economics. An Act was enacted in 1922 for re-

organization of the University as unitary, teaching and residential institution with control over the quality and character of teaching in constituent colleges. The Muir Central College became the central point for the teaching university. The jurisdiction of the university was confined to territorial radius of ten miles from its Convocation Hall. In 1955, a further amendment was made in the **University Act**. After that three categories of colleges came into existence. Associated colleges, which were residential imparted full degree courses as distinct from tutorial instruction. The State Government maintained this. The **Uttar Pradesh State University Act, 1973** replaced all earlier Acts and subsequently re-enacted with certain modifications (Re-enacting by the amendment) **Act 1974 (U.P. Act No. 29 of 1974)** which extended to an area within radius of 16 km from the Senate Hall. There were three University College which supplementing structure given by the university's eleven associated colleges providing degree course besides one constituent college maintained by the U.P. Government. These college have enrolled about 31,430 students in various disciplines.

2.8.1 University of Lucknow (1921)

The idea of establishing a university at Lucknow was first mooted by the Hon'ble **Sir M.A. Harcourt Butler** who was appointed Lieutent-Governor

of Uttar Pradesh. He renewed the proposal. A committee of educationists interested in University Education was formed at Luknow in 1919. It was resolved that a unitary, teaching and residential University at Lucknow was recommended to Calcutta university commissions which recommended to set up a university at Lucknow. A bill was introduced in the Legislative Council in August 1920 for the establishment of the university and passed in October 1920. In July 1921, the University undertook teaching. The king George's Medical College, the Canning College and the Lsabella Thoburn College formed the nucleus for establishment of the University. The earlier Act has been replaced by the **Uttar Pradesh State University Act, 1973**, and re-enacted with certain modifications (Re-enactment and Amendment) **Act 1974 (U.P.Act No.29)**. The jurisdiction of the University extends to a radius of 16 Kilometers from the Convocation Hall of the university. The Enrolment is 34,000. There are 15 Halls in the university including four in the King George's Medical Colleges, two of these being for women students in which 2,300 students can be admitted. An employment information and guidance bureau is functioning in the university for the benefit of students for employment assistance, and renders vocational guidance etc.

The University Library called '**Tagore Library**' (Central Research Library) is one of the biggest libraries of Northern India which is fully computerized, having a part of INSDOC (CSIR) Network named as SIRNET NETOWRK, (1992-93). The University Library has 5,00,000 books and 500 current periodicals. There were **8000** books added during the period under study. The library attends about **2,500** users every day. The Library has budget of **Rs.12 Lakhs**. The University budget income-wise was **Rs. 1016.62 Lakhs**. The university received a grant from State/Central Government and UGC was Rs.1016.62 Lakhs. The university library budget in comparison to university budget is **1.1%**, which is a poor budget as per standard norms for library budget.

2.8.2 Mahatma Gandhi Kashi Vidyapeeth (1921)

Kashi Vidhyapeeth (Now known as Mahatama Gandhi Kashi Vidyapeth) was founded on **February 10, 1921** and its foundation stone was laid by the Mahatma Gandhi. The Vidyapeth was put on the map of the Institutions of higher education through the munificence of late Shiva Prasad Gupta. In **1960- 61** the constitution of the Vidyapeth was amended to enable it to accept financial assistance from the Government and Kashi Vidyapeth has functioned as a deemed university under **UGC Act** from **July, 1963 to January 14, 1974**. It has been declared a Chartered

University (under Uttar Pradesh Universities Act, 1973) with effect from **January 15, 1974**. The Vidyapeth, a residential University, imparts higher education at the level of graduation, post graduation and research degrees. The name of Kashi Vidyapeth has been changed to Mahama Gandhi Vidyapeth w.e.f. 11th July, 1995. The University enrolled about 8071 students of various disciplines during the period under report. The University has three hostels for boys with 322 seats and one for girls with 80 seats.

The University Library called 'Shri Bhagwandas Central Library' is one of the big libraries in U.P. The Library has 1,95,781 books in its collection and 675 periodicals on subscription. The Library issued about 45,265 books to its readers. The Library Budget for the year was Rs. 3.50 Lakhs. The University Grant Commission during the 8th Five Year Plan Granted Rs. 25 Lakhs for the development of university library. The University's annual budget during 1995-96 income-wise was Rs. 368.62 Lakhs and Expenditure-wise Rs. 440.87 Lakhs. The Library Budget in comparison to University Budget was **0.7%** which is a very poor library budget as per standard norms for library budget.

2.8.3 Dr. Bhim Rao Ambedkar University, Agra (1927)

With the re-organization of the University of Allahabad as a unitary teaching and residential University in 1927, it became expedient to establish and incorporate a university at Agra to affiliate the colleges which were earlier affiliated to Allahabad University and also other colleges in the United Provinces, now Uttar Pradesh. Agra University was established on **July 1, 1927 by Act VIII of 1926** of the legislature of United Province. Subsequently, it was decided that the University should also organize departments in at least a few subjects so that postgraduate teaching and research should be concentrated at one place .

Agra University Act, 1962 says, "Whereas it is expedient to establish and incorporate a university at Agra for the purpose of affiliating the colleges associated with the University of Allahabad as organized by the Allahabad University Act, 1921 so as to set the University of Allahabad free to function as a unitary teaching and residential university by, relieving it of the responsibility of controlling the quality and character of the teaching given in its name by the associated colleges and planning such responsibility upon an affiliating University remained an affiliated University at Agra..." that the Agra University is set up.

Accordingly Agra University remained an affiliating University having its writ over U.P., C.P. Rajasthan etc. The name of Agra University has been changed to Dr. Bhim Rao Ambedkar University w.e.f. 26 September, 1995. The teaching institutions, namely, KM Institute of Hindi Studies and Linguistics (1956); Institute of Social Sciences (1956) and Institute of Home Science (1968); University Teaching Departments in Subjects of Physics, Mathematics, Chemistry and Zoology (1981); Department of Library Science (1984) and Department of Commerce, Business Management and Economics, MBA (1993) were established as University constituent centers.

The earlier Act was replaced by Uttar Pradesh State **Universities Act 1973** and re-enacted with certain modification by Uttar Pradesh Universities (Re-enactment and Amendment) Act. 1974 (U.P. Act. No. 29 of 1974) Jurisdiction of the university extends to districts of Agra, Etah, Aligarh, Mainpuri, Mathura and to whole of the State for purpose of Homeopathic Education. The University has **49** affiliated colleges, **5** constituent institutes and **6** teaching departments, the university enrolled **99,835** students during **1993-94**. The University enrolled 88,775 undergraduate's students (men-53,265 and women-35510) and 34,615 postgraduate students (men-20769 and women-13,846) during 1995-96.

The University Library called 'Central Library' has 1,58,631 documents in its stocks and yearly addition during 1995-96 was 2,950 books and 173 journals were under subscriptions. The Library received 215 periodicals from different countries in exchange for the 'University Journal of Research'. The library issued 18000 books for home study to its readers. During the period under survey the library users consulted 56,780 books.

The Central Library of the University has seating capacity of about 130 students at a time. The library provides 14 cubicles for research work and 4 Seminar Rooms. The affiliated colleges, three institutes and six teaching departments maintain their own specialized libraries. The Institute of Social Sciences library has 16000 volumes, K.M. Institute of Hindi Studies has 39000 books besides a good collection of rare manuscripts and standard books of reference and Institute of Home Science has 8,975 volumes in its library.

2.8.4 Gorakhpur University (1957)

The Act for establishment of the University was passed by the Uttar Pradesh Legislature in **May, 1956** and came into force on **August 3, 1956**. The University started functioning from the academic session

1957-58. The Act replaced by Uttar Pradesh State University Act, 1973 and the Uttar Pradesh University (Re-enactment and Amendment) Act 1974 (UP Act No29 of 1974). Jurisdiction of the University extends to the districts of Gorakhpur, Deoria, Basti, Siddharth Nagar, Maharajganj and Padrama (Districts of Azamgarh, Ballia Ghazipur, Jaunpur, Mirzapur and Varansasi have been transferred to Purvanchal University). The University has two constituent Colleges and 34 affiliated colleges; it enrolled 98,504 students.

2.8.5 Sampurnanand Sanskrit Visvavidhyalya (1958)

The Varanaseya Sanskrit Vishvavidyalaya (now known as 'Sampurnanad Sanskrit Vishvavidyalaya') was established in **1958** by an Act of the Uttar Pradesh Legislature (**Act No XXVIII of 1956**), by converting the erstwhile Government Sanskrit College, Banaras into a full-fledged University. The University is affiliating, teaching and partly residential in character.

The Vishvavidyalaya was renamed as Sampurnanand Sanskrit Vishvavidyalaya with effect from **December 14, 1974** by the Uttar Pradesh State University Act, 1973. The jurisdiction of University extends to all over India. The university has more than **1000** affiliated and

recognized colleges and enrolled 756 students (men-659 and women-97) during 1995-96.

There is a great tradition of research publication in Research Institute. More than 200 research publications in Sanskrit, Pali and Prakrit have critically been edited and brought out through different series as world known Saraswati Bhavana Series. Moreover, Mahapurana Vishayanukramakosha, descriptive catalogue of the Sanskrit Manuscripts deposited in Saraswati Bhawana Library.

The University has 4 hostels for 400 male students. Hostel accommodation is provided free of charge to all students who wish to reside in the campus. Quarterly Research journal Saraswati Sushama and Krig-Ganit Panchangam are also being published every year. The University also started two courses Sampadana exams Anusandhana Prashikshana Pramana-Patriya and 'Sanskrit Bhasha ?Shikshana Pathyakrama' in this Institute. The University Annual Budget Income-wise : Grant received from the State Government Rs. 375 Lakhs and Rs.80 Lakhs received as fees, the university received Rs.15.02 Lakhs from other sources during 1995-96. The University Annual Budget Expenditure- wise was Rs.460.92 Lakhs

The University Library has a collection 1,09,254 MSS and 1,77,320 books in its stock. The library was by 87,436 readers in a year. The library budget was Rs.3.75 Lakhs. The space available for reading can accommodate 152 students at a time. The Library provides the facilities for Microfilming.

2.8.6 Chaudhary Charan Singh University (1965)

Meerut University (now known as Chaudhary Charan Singh University) was established to meet the aspiration of local population and to relieve the Agra University of its multiplying responsibilities out of progressive increase in Colleges. The university was formed in **April 1965** when the Kanpur University and Meerut University Act was passed by the State Legislative Council. The University came into being as affiliating university that was published on **November 21, 1965**.

The earlier Act was repealed by the Uttar Pradesh State Universities Act, 1973 and re-enacted with modifications by the Uttar Pradesh University (Re- enactment and Amendment) Act 1974. The jurisdiction of the university extends over Meerut Division comprising the districts of Bulandshahr, Meerut, Muzaffarnagar, Saharanpur, Ghaziabad & Hardwar.

The University has **15** teaching departments, institution of correspondence courses and enrolled about **1,96,004** students during 1993-94.

2.8.7 *S.S.M. University, Kanpur (1966)*

Kanpur University was established by Kanpur and Meerut University Act 1965, passed by Uttar Pradesh Legislative Assembly on **April 27,1965**. The Act was passed by President on **June 25,1965** and the university was started functioning in January 1966.

The earlier Act was repealed by the UP State University Act 1973 and re-enactment with certain modification by the Uttar Pradesh University Act 1974 (U.P No-29). The Jurisdiction of the University extends to the districts of Kanpur, Fatehpur, Farrukhabad, Etawah, Lucknow, Raebereli and Sitapur and the university enrolled about **87,002** students during 1993-94.

2.8.8 *Kumaun University (1973)*

The Kumaun University was established on December 1,1973 by the Uttar Pradesh University Act,1973 (Act No.100)DSB College, Nainital and Almore College, Almora are its constituent .The earlier Act has been repealed and re-repealed with certain modifications by the Uttar Pradesh

University (Re-enactment and Amendment)Act 1974(UP Act No.29) as amended from time to time. The jurisdiction of the university extends to whole of Kumaun Covering districts of Nainital, Almora and Pithoragr. There are 2 constituent and 15 affiliated colleges. Enrollment was 39,019 student in 1992-93.

2.8.9 Bundelkhand University (1975)

The Bundelkhand University was established on August 25,1975 by the Uttar Pradesh University (Re-enactment & Amendment) Act 1974. Jurisdiction of the university extends over the districts of, Hamirpur ,Jalaun ,Jhansi and Lalitpur .There are 26 affiliated Colleges. Enrolment (1993-94) was 59,500 students.

2.8.10 Dr. R.M.L. University (1975)

Avadh University was established in March 1975 by U.P Sate University Act 1973(Act No.X of 1973).The university was recognized under section 12 (A&B) of UGC Act 'The university has been renamed as Dr. Ram Manohar Lohia University. The headquarters of the university is situated at Faizabad, Jurisdiction of the university extends to districts of Faizabad, Gonda, Sultanpur, Pratapgarh, Bahraich & Barabanki the University has 34 affiliated Colleges Including one /Engineering College.

The residential unit of the university has Postgraduate teaching and research in seven departments apart from Adult and Continuing Education Unit namely Rural Economics, History and Indian Culture, Solid State Physics (Elect), Mathematics and statistics Business Management and Entrepreneurship, Biochemistry and Microbiology.

2.8.11 Rohilkhand University (1975)

The university was established by the Uttar Pradesh University (Re-enactment and Amendment) Act, 1974(UP Act No.29) The university functioned from February 15,1975. The jurisdiction of the university extends to the districts of Bijnor, Moradabsd, Rampur, Bareilly Shahjahanpur, Budaun and Pilibhit there are 32 affiliated colleges. Enrolment was (1993-94) 92,00 students in 1993-94.

2.8.12 Purvanchal University (1987)

The university was set up in October 1987 by Act 19/1987 of the Sate of Uttar Pradesh as an affiliating and teaching institution. Jurisdiction of the university extends to the districts of Ballia, Ghazipur, Azamgarh, Mau Mirzapur, Sonebhadra, Varansi, Jaunpur, and Allahabad. The university has 87 affiliated colleges and a University Teaching Department in Business Management. Enrollment 37,470.

Chapter : Three

Marketing for Consumer's Satisfaction

MARKETING FOR CONSUMERS

SATISFACTION

Information is recognized as national product and contribute a substantial share to the national income .It is considered tool in the hands of decision-makers. **‘Right information to Right person at Right time’** assists in improving the ability of an Individual, a business firm, a government agency or other kind of similar institution to take the right decision which assist in achieving the aim of the information Without Information the countries can not develop or a developed country can not stay developed for a long time .So it is important to study the concept of marketing in the field of library and Information Science. Before going to analyze the main topic of this paper it is better to study first the concept of ' marketing' and 'Information Science ' than to study the main theme i.e. Symbiosis between marketing and Information Science profession.

Traditionally, marketing means selling and buying the product to earn profit. Profit was the first and primary task in the traditional marketing. Quality of product and satisfaction of customer was the secondary motto in that type of marketing .Now in modern marketing, which is known as customer oriented marketing, primary task of an enterprise is to study the

needs, desires and value of the potential consumer, and on the basis of accurate knowledge of demand an enterprise must produce a Product which will provide desired satisfaction to Customer. Customer is the heart of an enterprise in modern marketing system. All business operations are framed and operated around customer satisfaction and services. Marketing plans, Policies and Programmes are formulated to serve efficiently customer demand. Marketing research must be expected to provide adequate, accurate and latest information, which will assist in framing the policies for customers. Modern marketer thus opined " Marketing is ongoing process of

- (a) Discovering and translating consumer needs and desired product and service;
- (b) Creating demand for these products and services;
- (c) Serving the consumer with the help of marketing channels; and then
- (d) Expanding the market even in the face of keen competition"

On the basis of modern marketer consumer needs can be found out through planning and producing product; demand can be created through promotion and pricing and consumer demand can be fulfilled through physical distribution of the product. Thus marketing covers all business

activities necessary, for ascertaining and identifying of product, physical distribution of product by facilitating the entire marketing process.

A library is the trinity of user, document and staff. Staff functions as a bridge between document and user. The basic job of a librarian or an Information officer is to provide pinpointed, expeditious and exhaustive information to the Right user in Right way. It is one of the service-oriented professions like medical profession; teaching profession; and lawyer's profession where basic emphasis is given on user satisfaction. From book selection to withdrawal of documents from stack is always done by the librarian on the basis of user satisfaction. Information Science has been opined by Prof. P.B. Mangla as a **'discipline which is concerned with properties and behaviour of information as well as factors influencing the flow of information'** Thus, properties, behaviour and the factors responsible for generating the speed of new information constitute the basic element for information as a discipline.

To cope up with this new challenge of knowledge, librarian always conducts research not only in acquisition of information but also to know the actual demand of user community. For effective and speedy

communication of information, latest information centers. Should act suitably if we comprehend this is ongoing profession of :

- (a) Discovering user need (through planning)
- (b) Creating demand for information (through library publicity and extensions services)
- (c) Serving the user demand (through effective communication of informing)
- (d) Expanding the profession (through effecting of user)

3.1 Information As Commodity

Information consists of classified and interpreted data that are used for decision making. Though the term's data, information and knowledge are used synonymously, there is a basic difference between them. Data is the raw material is processed and interpreted to Form information. Knowledge is a stock of all information.

Consumption of information as a commodity is characterized by attributes like public goods, concepts, indivisibility, inherent uncertainty and risk in transition and other special features like sharability, compressibility, substitutability etc. All these attributer create problems in the market development for information.

Information as such is not commodity. Information as a commodity is represented by the products, service and channels, which carry information.

Like other consumable items, information gets produced as a result of activities and events that take place in everyday life. Growing recognition of it's role as a vital input to the economic, cultural and sociological progress of humanity, is causing more and more attention to be paid to methods of information access and use, resulting in the development of an industry in its own. Information products and services like any other commodity are demanded in the market and the demand is affected by factors like price, preferences, income, population, expectations and seasons. Except the price and technology of other goods, information is demanded only when there is value or utility to the consumer.

The supply of information products and service depends on the price of the product, the cost involved in its production and the technology used. Libraries, Information centers, information Analysis Centers, Referral Centers, etc. function as the distribution channels for information products and services. Information is an elusive commodity. Not only it is difficult

to define, but also it appears in various guises in different places. Many authors have tried to define information in different ways. However, the main point that emerges out of these definitions of classified and interpreted data that are used for decision making. It is needed for a variety of purposes contributing to decision making or problem solving. The term's data, information and knowledge are used synonymously. However there is a basic difference between these terms. Data refers to individual facts, statistics or group of facts, or the like. This means that data consists of discreet and unorganized pieces of information. When these facts, statistics etc. are processed, interpreted and presented and organized or logical from to facilitate a better comprehension of the concerned topic or issue, or are used for the purpose of problem solving or decision making, it become information. In other words data become information when we establish a relationship among different pieces of data. Information is therefore more valuable than data as data is transformed into a meaningful guide for specific purposes. Access to data does not automatically convert itself into information. Inference and interpretations are required. Thus data is the raw material from which information can be created by a process of human cognition resulting in knowledge creation. In order to establish information as a marketable

commodity and the user of information as a consumer, it is necessary to understand the characteristics or important features of information.

3.2 Public Good Characteristics

Like other public things information may be owned by more than one person and it is difficult to exclude non payers from the benefits of consuming or processing the information, in this sense it is a public good. Though it is difficult to find out the borderline between public and private goods, it is obvious that many available information products and services have some characteristics of public goods. Most of the stock of valuable information is produced or financed by government which makes it difficult to privatize information. However, there have been attempts to privatize information in some form or the other, for instance patents etc. The facts remain that it is mainly a public good. These characteristics of information have given rise to much discussion among economists and scientists. One line of thought is that it is only partly a public good and its market can be developed. On the other hand, some are opposed to the privatization of information on the basis that the wide use of information gives rise to benefits to the individuals as well as to the society as a whole. So it should be treated as public goods only.

3.3 Indivisibility

Information a public good is supplied to the community as a whole, which means that benefits accrue collectively to the society. In this sense, one can say that it is not divisible into units, which can be provided to the individuals separately. It is only supplied as a whole, even though most of it may be useless to individuals. On the contrary, if we see the recent development of SDI (Selective Dissemination of Information) where each individual is provided with the information actually acquired by him, then we can say that it is divisible like other commodities. In this sense information can be considered as a commodity with potential of marketability.

3.4 Non-delectability

Another important characteristics of information are its non-delectability, which means that like other commodities it can be exhausted.

Inherent uncertainty and risk in transition: The inherent risk in the purchase of information is related to its other attributes. A consumer of information cannot be certain of the value of a bit of information until he knows what it is. For a consumer there is risk in a sense that, when he purchases a bit of information, he cannot be sure of its value i.e. whether it

will be of any use to him or not. On the other hand, if he has perfect knowledge about what information to him is for sale, then he would no longer need to purchase it. This way it becomes difficult for the producers of the information, to assess the demand for information.

Apart from these attributes there are other special features, like shareability, like, compressibility and substitutability, which characterize information products. This gives rise to doubts about the treatment of information pose difficulties in the development of markets for them. Having looked into the attributes of information, let us examine what constitutes information as a product or a commodity. According to Marco Porat ' Information is a collection of many heterogeneous goods and service that together comprise an activity in the economy'. Information as commodity is thus, represented by the products, service systems and channels, which carry information. A clear distinction about information product and services are as follows:

Information products comprise three types of documents: 1) primary 2) Secondary and 3) Tertiary. Primary information is newly generated information and therefore the documents, which record and disseminate or communicate it, are known as primary documents.

3.5 Primary Documents

include: Journals, Newspapers, news-magazines, conference proceedings, Annual Reports, Research Monographs, Pamphlets, Working/ Discussion papers, Report Literature, Thesis, Dissertations, Govt. publications, Standards, Specifications, patents, Manufacturer's Literature, Maps, Charts, Atlases, Engineering Drawings etc.

3.6 Secondary Documents

Secondary information is derived from primary information and the documents in which they are recorded are known as secondary documents. Secondary documents are created to facilitated access to information contents of primary documents.

They Include Indexing Journals, Abstracting Journals, Current Awareness Serials, Review Journals, News Digests, Translation Journals Reference Books, Catalogues Accession Lists etc.

3.7 Tertiary Documents

Tertiary documents are those that record information about secondary documents. They facilitate access to secondary documents.

Include Bibliography of bibliographies, literature guides, directories etc.

In the recent past there has been exponential growth of information. It is not only the volume of primary documents that is increasing at rapid pace. But there has been increase in the specialization in all branches of knowledge, which is becoming more and more multi-disciplinary in nature. On the other hand, the time available of the users remains almost the same. Added to this, there is a need to have quick access to the vast amount of information. Provision of information services, therefore, becomes an urgent necessity. Information service may be basically of bibliographic type like, current awareness service, SDI service, indexing and abstracting service, literature searching, where the user is guided to the primary documents. It may also include a reference service, which provides the answer, rather than the techniques through which the answer could be found. Also included is a translation service, where the contents of the documents are translated in the language of the user, document

delivery service where the complete texts of various references are delivered to the user either in original or in photocopies.

The idea of marketing information as a commodity is closely connected to the concept of economic change and information is exchanged through information products and services. Information is considered to be one of the basic resources for the basis resources for development and hence sold and consumed. In this sense, information handling in its entirety is regarded as an industry. i.e. information industry. Multimedia through which information can be accessed introduces another dimension to the problem. The process of information generation or production is a continuous one. With the advancement IT and tremendous growth of population, the amount of information produced and transmitted has grown at an explosively high rate causing an information explosion. The concept of 'marketing of information products and services through libraries' is of recent origin. The idea got momentum with the advancement of information technology, more specifically Internet and World Wide Web.

3.8 Marketing for Libraries

Modern marketing not only covers buying and selling the product but also include services rendered to the customers. When a customer enters. When a customer enters the service market and buys a service, he busies the time knowledge, skill or resources of someone who is the provider or supplier of that service. The buyer receives satisfactions or benefits from the activities of the provider .For example, a private practitioner doctor sells the knowledge to the patient community .He charges fees from the patient and patient receives is buyer and advice of the doctor works as product.

Similarly in library and information profession marketing can be equally applied as applied to other service oriented profession. A librarian always provides desired information to the user. A user consumes the time and skill for searching desired information of librarian. Thus user not only saves his time skill but also receives satisfaction from the service of librarian If he can start charging against desired information, marking in library science will take place and librarian will be termed as user will be as buyer and desired information will act as product. In countries like India marketing in libraries is in primary stage of its development. For example Photostat or Xeroxing facilities are more commonly used in all

type of libraries. A user of library can obtain a photocopy of a particular page of article after payment of 25 paise or 60 paise. This service is available after payment. In other words we can say Librarian is selling this service after payment. Whatever is the price for this service is other matter of discussion. Determination of price is market strategy. There are such other services which can be purchased by user after payment such as translation, compilation of bibliography, Inter library loan, selective dissemination of information etc. price of service is always determined on no profit no loss basis because ultimate aim of library is to provide satisfaction to their clientele. Marketing in library profession can be defined as a management process, that identifies, anticipates and satisfies user's information need with no earning profit.

3.9 Symbiosis Between Marketing and Library Information Science

3.9.1 Basic Element

This basic element of a market is a seller a buyer and a product, which constitute a market. Similarly in library profession Librarian can be considered as seller; user as buyer and desired information as product. The qualities of a good shopkeeper is to possess attractive personality, cheerful

nature; good knowledge about the product, encyclopaedic memory, and ability to judge the psychology of consumer. If we compare these we will find a successful librarian must have these qualities.

3.9.2 Marketing Segmentation

It can be defined as by the process by which heterogeneous market are subdivided on some common characteristics. Each segment is homogenous within itself and heterogeneous between segment ” In other words we can say it involves the identification and specification of significant group within the total market. Differentiation can be on the basis of any one of many characteristics such as age, sex, intelligence, occupation, and status. The principle of 4 P's is important in marketing segmentation i.e. people product, price and profit. Segmentation is a customer-oriented strategy, which gives special emphasis on the demand side of the market. It recognizes that there are several demand schedules, each demand schedule representing a group of buyer with similar needs. It is a method for achieving maximum response from limited resources by differentiating various parts of the market. The benefits from market segmentation's are:

3.9.3 Marketing and Promotion

Marketing is in better positions to locate and compare marketing opportunities. Similarly a librarian is in a better position to know .

We all need to promote our libraries and information services on continuous basis, whether or not we make a charge to the consumers. Consumers who are potential users need to be made aware of, and kept up to date with the range of services available to them. However we also need to inform our consumer -base of any changes in the procedures which underpin the services. Internal consumers need to be made aware of the fact that charges are going to be passed on the departments or individuals, and the reason for this should be made clear i.e. as part of a more efficient management and financial planning approach. If one plan to introduce any internal service level agreement or statement of service standards, it would be appropriate at the same time to set out the new charging arrangements and to promote any new methods of information provision. In the case of charging to external consumers we need to be able to set the notion of charging against the perceived additional benefits to the consumer of any new or enhance service.

There are a number of methods of communicating with both internal and external consumers. It will have to decide, given the mix of our consumer-base, just what sort of marketing and promotion techniques would be most appropriate and what kind of image are aiming to present - do the library need a trademark- an appropriate name or logo? Budget constants may mean that would want to produce a common core of publicity material so that it could be used both internally and externally, or easily adapted to cover both, by using separate supplementary inserts for 'free' and charged services.

3.9.4 Training Needs

What will become apparent is a range of staff training needs. Ways of addressing these must be into the project plan. Various skills and knowledge will be required if the new services are to be a long-term success. Attitude and understanding are equally important. For example, if the library is planning business information services, those dealing with the consumers of that services will need not only to understand the terminology, the language of services, and be aware of new issues and developments in what is rapidly moving filed, but also understand the commercial culture and the way in which it ?

Training to put relevant skills into place will enable those involved to respond to demands in the most appropriate and efficient way. When consumers are charged for a service they tend to be more alert to, and critical of any perceived failings. The areas for training, whether knowledge or skills based, and the methods to be used will need to be considered in the light of the specific service offered and the previous experience and training of the individual members of staff. Some may need just a refresher course in certain areas such as an update on sources, others will need more detailed training.

3.9.5 Internal Consumers Surveys

Consumer's surveys will need to be carefully structured to ensure that they can be carried out as efficiently as possible, without taking too much of the consumers time. The most effective way is likely to be through the face to face interview but this requires planning. To save the consumers time by finding out beforehand as much as about their areas of responsibility and therefore, likely information needs.

3.9.6 External Consumers Surveys

External consumers will fall into two main categories:

- **Regular Consumers:** Possible already users of the library for other services
- **Occasional (or possibly one-off) Consumers:** Providing less opportunity for regular consultation and feedback

3.10 Consumer's Relations (CR)

Library - consumer's relations (LCR) requires a multifaceted description. It involves the various services which a library provides throughout the geographic area it serves; the qualities of that community which help shape library policy; and the actual interaction between a library and its consumers which result in two kinds of major benefits; the consumers' Effectivity and awareness and use of all the library has to offer, and the library's assurance of its consumers continuing good will and support.

Librarian must strive to retain regular consumers and to reach out and attract great numbers of reluctant users who may fear the 'intellectual' label of an educational institution. No CR program is effective if, once attracted to the library, a consumer is faced with an uncooperative or actually hostile staff members. This holds true as well for those who phone, for if the librarian is rude and condescending in giving the requested information, the consumers will be quick to react.

Chapter : Four

***Information
Technology***

INFORMATION TECHNOLOGY

The Post-World War-II period is said to be the harbinger of computers in the field of science and technology. Some of the developments started centuries ago, and their roots can be traced back to ancient civilizations. But sudden and explosive growth in IT and Information systems that we are witnessing today have been brought by two factors: (i) An economic and social need and (ii) A technological innovation. Information Technology has come to occupy the centre stage of development, with the approach of 21st century. There is not broad consensus that IT is shaping our world. It is becoming increasingly the key to national economic development and well-being, certainly to affect virtually every industry and service through significant qualitative and quantitative improvements in providing information, in designing products & services, in tackling and responding to a variety of demands & in supporting decision making. Conceptually, IT involves use of computers and information systems for storing, managing and accessing useful information in an optimized and organized way. Storage of large volume of data, effective data management, maintenance of data management, maintenance of data consistency and integrity and quick and ready access of data are some of the major features of IT. The IT revolution has embraced the university library system. A massive and rapid computerization process through out

the educational system has made IT an integral part of the library management scene in many countries. Earlier computers belonged only to institutions and large organizations. Now the personal computers have placed computing power in the hand of numerous individuals. After the invention of the microprocessor, high-density storage devices, video tape recorders, compact disc, optical cables, satellite telecommunications and other information and communication technologies.

The incorporation of IT into the day-to-day activity of university libraries has a strong impact on virtually every aspect of their management process. Computerization of data processing and data mobilization can support library staff in their daily activities, improve consumers effectiveness, efficiency and assist in attainment of educational goals. This can assist library professional in managing more informed decisions especially those involving several variables and more complex relationships among these variables. Thus it can contribute to services renewal, excellence enhanced professionalism and strengthened librarianship.

4.1 Definition

The word 'Information Technology' is a combination of two words. One is 'Information' and the other is 'Technology' Information means

knowledge can be a bit or a para or a page. Technology refers to the use of computer and communications. It means the application of computer and communication technologies for gathering, processing, storage, retrieval and dissemination of information.

ALA Glossary defines IT as “as the application of computers and other technologies to the acquisition, organization, storage, retrieval and dissemination of information”.

According to **Albeit**, IT can be defined from the Library and Information Science point of view as “application of various technologies for the acquisition, processing, storage and dissemination of information. The term various technologies included micro-electronic based computers, telecommunications, Reprography and printing etc.”

UNESCO defines IT as “ The scientific, technological and engineering discipline and the managerial techniques used in information handling and processing; their application: computers and their interaction with men and machines and associated social, economic and cultural matters”.

According to **Johi Diebold**, Information Technology will change the world more permanently and more profoundly than any technology so far seen in history and will bring about a transformation of civilization to match.

4. 2 Meaning

Information Technology is a recent pervasive and comprehensive term. For many people Information Technology is synonymous with the machines, microcomputers, automated equipments, word processors and the like. For other, the significance of the introduction of a new term 'Information Technology is the belief that the principles, practices and terminology of information handling can be treated on a unified 'systematic basis. Information Technology is generic term used to denote all activities connected with computer based processing, storage and transfer of Information. The word 'documentation' and 'information sciences' are considered synonymous to IT. It includes computers, electric media in satellite, telecommunication and. therefore, IT is convergence of computers, telecommunications and information. IT can also be described as the whole range of processes for acquisition, storage, transmission retrieval and processing of information. IT is the science of information handling, particularly using computers to support the

communication of knowledge in technical, economic and social fields. IT could affect society, organizations and people in ways other than making jobs more interesting in improving productivity etc.

IT can be regarded as a major economic factor in the development post-industrial society; the production and sale of IT goods has revitalized some section of economy and to a small extent, replaced some of the losses, brought about by the decline in manufacturing. Since it can contribute to economic growth and development by reducing costs, improving and / or extending services, strengthening competitive advantages and soon.

4.3 Need and Importance

There are a number of reasons why IT is becoming a subject of wide-ranging discussion and study. Each of their reasons is significant on its own, but by acting together, as they are adding urgency to the need to understand the technical and social issues involved.

There has been an explosive growth in the volume of information leading to emergence of information society. It has been estimated that one trillion pages of information were generated in USA alone in 1993. It is

observed that USA produced only about 25% of total world's information output. Therefore, the total output of the world crosses 4 trillion pages in one year which is growing at the rate of 6 to 11% per year over the past decade. As a result of knowledge explosion, consumers have been confronted with the problems of searching and retrieving the required information in right time. It has been estimated that on average professionals spend 5 to 15% of their time on reading but up to 50% of their time looking for information¹.

The storage and maintenance of huge information on paper documents have become extremely costly, time consuming and labour intensive. Printing itself is one the costliest options now available for disseminating information. Information storage medium has been drastically changed over the years from storage, i.e. papyrus, clay tablets, leather, paper or plastic to huge information in text, audio, video form and speedy dissemination to the needy around the world. As observed by Martin Katherine (1994) one megabyte of the information on paper might cost on an average four dollars on diskette perhaps 1.7 dollars and on CD-ROM

¹Katherine, Martine. Understanding the forces for and against electronic information. CD-ROM Professional vo.7 no.4 (July/August 1994) p. 129-134

might average 0.0024 dollars or even less. If IT is not going to be used, then the society becomes handicapped, because of socio-economic development of a nation depends upon the availability of adequate infrastructure to access the modern information, which is an essential ingredient in day to day decision making process, necessary for some the following reasons.

1. Advantage like Speed, Accuracy and reliability in the process of information due to introduction of IT. This also helps information consumers in performing the search quicker and with precision.
2. The vast published literature in keeping abreast of the know-how and the development of IT
3. Due to escalation of prices of periodicals and books, no library can afford to acquire all the publications. This necessitates active resources sharing among libraries. This is really successful on through networking to participate in the network, computerization of libraries is a prerequisite. For this reasons also, the librarians are tending towards involvement in IT.
4. Literature in almost all the fields are increasing tremendously in multidimensional way. It is posing a major problem to have

bibliographic control on the basis of manual operations. This is only possible through computer applications

5. Information seeking behavior of consumers is also changing. To cater the needs of the consumer's storage capacities of information as well as retrieval techniques should be applied to supply them with modern information.
6. Making the right information available to the right consumer at the right time in the right place to take the right action is the aim of any modern library services.

The IT has brought the people of the globe nearer. Although application of the information technology is only about 25 years old it has revolutionized the information services. In libraries universal availability of bibliographies is difficult to achieve. But IT has made it possible in reality. Concerted efforts are on the adept the IT in all spheres of activities.

4.4 Components

The various components of Information Technology are as under:

1. Computers
2. Telecommunications

3. Storage technologies
4. Database
5. Information System
6. Microforms or micro-graphics
7. Expert System
8. Videotext and tele-text
9. Reprography
10. Inter-Net
11. E-mail
12. CD-ROM etc.

4.5. Major Changing Agents

4.5.1. Computers

In 1949, Bell laboratories developed the first transistor, into the era of solid state technology. In 1958, the first transistorized computer- the UNIVAC solid state 80 and systems –appeared. Transistors provided faster operations, were more reliable, and generated less heat then vacuum tubes which is termed as second generation computers. IBM1401 introduced in 1959 which promoted computerized commercial data processing, deluged to this generation of computers. Use of Magnetic Tapes made IBM 1401 a very successful business computer. Magnetic

Tapes (developed in 1950) was compact, portable, permitted sequential storage and retrieval of 50-100 million characters of data, and provided rapid transfer of data to the computer. During the sixties, IBM of USA and ICL of UK ruled Indian market with their second-generation computes, viz. IBM1401 and ICL1901.

Third generation computers were introduced in the mid-sixties. These computers were based on tiny Micro miniaturized Integrated Circuits (IC's) Silicon, an element available in abundance, was the material used in marking integrated circuit chips. Through a series of manufacturing steps, the properties of the silicon chip were changed, thus creating a means of controlling electrical signals are vital to the functioning of a computer system. Integrated circuits provide vast internal storing and operated in billionth of a second, i.e. nanoseconds. Ever since the invention of the integrated circuits, the process of constant and continuous miniaturization of IC's has been going on. Large Scale integrated (LSI) chips become available in 1969. Computers built on LSI chips could be termed as Fourth Generation Computers, even though there is no general agreement on what constitutes a fourth generation computer. Very Large Scale Integration (VLSI) chips and Bio-chips are used in today's computer. Invention of the microprocessor in 1972 could be one of the most important events of

the last century. The first single metal-oxide semiconductor (MOS) chip manufactured by the Intel corporation in USA, called the INTEL-4004 microprocessor, carried 2250 transistors on a tiny silicon chip measuring 0.117 inches by 0.159 inches. Avowal, microprocessors provide enormous processing speed. Intel Pentium –III processor having a speed of 733 MZ is widely used these days. When integrated with storage and input/output units, a microprocessor produces a microcomputer. Microcomputer are bringing about a revolution in computing and librarian work styles. Currently, American and Japanese manufacturer are competing with each other in developing a 'thinking computer'. This computer is designed (experimentally) as to resemble the human thought process and is expected to operate at a speed much faster than today's computers. Recent advances in the field of artificial intelligence are being used in designing the logic for the thinking computer for building expert system and knowledge-based systems. One of the objectives in artificial intelligence is to equip computers with human intelligence and the power of deductive reasoning. These computers are termed as fifth Generation computers.

4.5.2 CD-Rom

The CD-ROM technology brought the beginning of most profound revolution for the library and information professionals. Most of the

libraries prefer CD-ROM service due to enormous capacity of storing data quick retrieval of the same. Librarian started using CD-ROM networking in the early 1990' it resulted in a number of advantages to both the users and the librarians. Access form users point of view was much improved and searching form multiple discs become possible. Along with these advantages, some other problems began to crop in how the users find their information or data base they wanted from the network? How the users know the names of the databases in their subject areas? Appropriate networking software was thus necessary to make sure that databases could be made accessible to the users. Here the experience of the librarian with the retrieval skill and understanding of databases could be made accessible to the users. Here the experience of the librarian with the retrieval skill and understanding of database searching are being used.

4.5.3 Internet

Internet is the most talked about subject in library and information science field. If we take any journal of library science we will surely find at least one article on Internet. Internet is transformation the library systems and the way in which we view information resources. The idea of library as a place is being questioned now. Librarians are forced to learn to organize

and manage systems that find out and provide access to information kept elsewhere.

Man has, over the years, used machines and animals to lighten the burden the manual labour. Today we use computers to lighten our burden of storing, processing and retrieving of data for decision making. Computers have revolutionized the field of computing as a result of technological advancement. The first mathematical device to facilitate arithmetical computations was the Abacus used by the Chinese before the birth of Christ. It is an ancient device, which used beads strung on wires to aid arithmetical computations. It is indeed remarkable that this device is used extensively in China even today. However, the first computer capable of performing basic arithmetical functions was designed only around 1840's by Charles Babbage, which he called the Analytical Engine. The first electronic digital computer, ENIAC (Electronic Numerical Integrator and Calculator) was announced in 1947, based on vacuum tube circuitry. Von Neumann introduced the concept of stored program around the same time, and the first electronic digital computer using stored program, EDSAC (Electronic data Storage Automatic Calculator), was announced in 1949. Subsequently, Remington Rand (USA) Developed the commercial computer UNIVAC (Universal Automatic Computer) was using this

technology. The first computer user in USA was the US Census Bureau, which acquired a UNIVACI in 1951. The first business firm to acquire a computer (UNIVACI) was the General Election in 1954. Their computers use vacuum tube circuitry and are said to belong to first generation computers. In India, the first generation computers were used at the Indian Statistical in Calcutta and at the TATA Institute of Fundamental Research in Mumbai.

4.5.3.1 Idea of Internet

There is no single, generally agreed upon definition of the Internet. The Internet is a net work spread worldwide. The modern grew by connecting a user with a LAN. LAN with a regional network; a regional network with a backbone (each country has at least one backbone network). Internet may be thought of as the international network formed by the cooperative interconnection of computing network having a global remote control in storing, retrieving and providing exhaustive and expeditious service of 'vast collection of even vaster libraries' of information on any topic of one's choice. What can Internet do? Is a usual question. This question is never satisfactorily answered. In simplest terms, it can do this. It can send information from one computer to another. The trick is that the computer involved spans the world. We can take the Ph.D. thesis we have

just completed and send it to our guide, who is in Germany on a tour within second and have his remarks his return. Real time scientific data between two experiments located respectively, in London and Delhi or Lucknow and New York or browsing thought books at the library of Congress from a classroom in a rural community in Uttar Pradesh become a reality. We are encountering on the Internet people and information both, which could help us as librarians. Internet allows us to be in contact with a lot of people. There are tools, such as electronic mail and news groups, we in communicating with people who are interested in our topics. They are often more then eager to help us, providing answers to questions and engaging us in thoughtful discussions. Internet is a medium for accessing a vast amount of information.

4.5.3.2 Internet Connectivity:

To have the global information at one's fingertips a user must, first of all, have connection with the Internet via the service provider. A computer, some communication software, telephone line, a modem and service provider are needed to have an access to the internet. There are two types of Internet connectivity.

- *Full PI connectivity and*
- *E-mail connectivity*

There are basically two ways to a network connection.

- *The Direct (Dedicated) link*
- *The Dial-up Link*
- *Direct Dedicated Link*

It is a permanent connection providing 24 hours, 7 days link over a telephone line between a modem (upto 28.8kbps and a router (56 kbps and above). A router is specialized computer that reads the address of each TCP/IP packet to its destination. Having this link, all the basic Internet tools and resources are always available to a user. A full dedicated high speed link is suitable for a larger library like university Library or organization that provides information to the Internet and that wants a 24-hours, 7days connection where as a smaller or ganisation with an individual account with a service provider may do better.

Dial-up Connection: University libraries like other user may have connection using dial-up like to the following three major ways,

i. Host/Terminal Connection

In this connection the computer host. It is suitable for library with limited budget, that wants occasional connectivity and that wants to connect via the Telnet programme to a host from some other on the network in order to obtain a specific service.

ii. Individual Computer TCP/IP Link

with an individual computer TCP/IP link a University Library also will be able to use its computer as an Internet host. It's your host running whatever software you elect to run, providing only the service you've chosen to provide. These links called either SLIP (Serial Line Internet protocol) or PPP (Point-to-point Protocol) will handle dial-up and are able to take advantage of software techniques for compressing or decompressing the data being transmitted. With this type of connection a University Library can use a graphical WWW browser, direct file transfer or a PC based mail services that depend upon direct Internet connectivity.

iii. Dial-Up or on-Demand TCP/IP Link Through LAN

It is the intermediate step between individual dial-up and dedicated high-speed link. With this connection, software in the server dials-up the service provider.

4.5.3.3 Hardware Requirements

Any PC preferably a good high-speed 733 Mhz. Pentium-III processor, having 64 MB of RAM and 10.2 GB HDD. A good laser or inkjet printer and a modem (modulator/demodulator) are also necessary.

4.5.3.4 Software Requirements

Choice of software depends upon the purpose for which the computer would and the available services provide by the service provider. Communication software is commonly used in combination with a modem. Packages fall two categories, i.e. Terminal packages and TCP/IP based packages. Terminal packages are user for accessing most host/shell account systems and TCP/IP based packages enable a computer become a host on the internet. TCP/IP based communication software has become more common and it user either SLIP or PPP. TCP/IP based packages like Procomm, WinQVT and browser like Netscape, Lynx or Internet Explorer are required. Software like **LIBSYS, SANJAY, TLMS, SOUL** are widely by the University Libraries for automation of their HouseKeeping operations. Selection of the right software is a very job for the librarian. Selection of right Internet Service Provider is very important. The university librarian should take utmost care to select the Internet Service Provider. The library administration should consider the following points in choosing a service provider.

- Type of account (IP dial or host-based/shell)
- Speed of the connection
- Installation and monthly recurring charge
- Monthly local loop charge

- Separate cost of the required equipment's
- Charge of extra connect hours
- Availability of the connect hours
- Availability of assistance for facing anything wrong
- Availability of training facility and any other cost that may be changed

4.5.4. *E-Mail*

Electronic mail popularly Known as 'E-Mail' is the most common service on the internet. It is a store and forward service. It allows us to send messages- may be a private letter, a request for software or a file and information on any subject and language from one machine to another. It does not require the presence of persons to receive e-mail because once the message is addressed it is routed from one place to another until ultimately it appears at its destination. If the message is addressed incorrectly or the network is unable for any reason to deliver it, the message will be bounced to senders e-mail box.

E-mail address is made up of to parts, namely user names (the part before the @ sign) and a computer service name e.g. yahoo, hotmail, usnet, etc., finally the country code or the type of service provider. With reliable connectivity to internet one can use it to subscribe on-line magazines and

newsletters, access to discussion groups, send and receive computer files and can use facilities such as fyp, gopher, WAIS, www etc. The basic E-mail functions are read, compose, reply, delete, include or attach, address book or alias, sorting of mail etc.

4.5.5 Telnet

Telnet may be user by the University Libraries as an Internet tool that allows a user to have an access to the front door of other networks, services or resources. It connects a workstation or node to a remote computer enabling a user to interact with it and issue commands to that computer. This facility allows one to have access to the data on the computer of another University or institute. It facilitates to look at library catalogue, to see if a certain book has been published and to use one of the services of the information providers, such as Dialog. Most of the University Libraries USA and Europe viz. California University, Stanford University Colorado University, Princeton University, Oxford and International organization like Library of Congress have made their library catalogue available for the internet user. Services like Gophers, line-mode web service and libraries can be had with the use of Telnet.

4.5.6 Advantage of E-Books

- Very less cost than traditional books,
- No shipping and handling charges when purchased on-line.
- Economically feasible to publish low demand titles.
- E-books never go out of prints.
- Authors have the ability to self publish and distribute their own books inexpensively.
- E-books look up words with multilingual dictionary software.
- Search for specific text – able to find out quoted text in seconds .
- Font size may be changed according to the need of the eyes

4.6 Impact on Concumer's

The vast technological revolution in the library and information science has made a drastic in the nature and service that consumers can have from a well-equipped library. On-line databases and World Wide Web (WWW) offer access to a large amount of data beyond what the traditional single library collection can offer. This requires learning of new skills by the librarian. Presently the librarians are being exposed to the use of computers and the related technologies. Thus primitive ways of imparting services are gradually giving way to interact with the user in a more

sophisticated ? The IT scenario undergoing a radical change, it is essential for the librarian to have some knowledge of computer and communication technologies. He/she must also have the capability to continue with the users. His/her role is to assist others to access the network and information resources of the library. Thus he faces new demands and acquires diverse abilities to become a modern librarian.

4.7 Information Technology : Need of an hour

A wide variety of advantages can be derived by the appropriate use of Information Technology. It is the need of an hour today. IT advantage can refer to anything useful produced with the assistance of technology which allows to complete more tasks with greater accuracy and better quality in less time and for lower costs. It could be higher productivity, better quality or it might be less tangible like ensuring consumers to have a better image of the library, improved response time or improving staff morale and motivation. In certain nature of jobs, hours of manual work are possible for completion within minutes through IT. Perhaps, there may not be any are of operation or services where one cannot apply IT and get benefits in the following ways.

1. helps to avoid duplication of effort and work in library operations
2. facilitates cooperation and resource sharing through library networks

3. helps to introduce new services and improve existing services
4. allows integration of various library operations
5. executes repetitive nature of works
6. facilitates faster information communication
7. helps to increase morale and motivation of library staff
8. facilities easy and wider access to all kinds of information sources
9. helps to increase efficiency and effectiveness in library operations
10. ultimately helps to save time, space energy and resources
11. helps to improve productivity and image of the library

The computer, with its versatility, accelerates one's ability to solve many problems related to easy access of information, research and administration that are encountered in university libraries to achieve its goals.

4.7.1 Vital Role

The role of computers in university libraries has more than one facet; one of them is that it is an object of 'information in its own right as a service. Second could be as a tool for technology, the former role is vocational and the latter one is pedagogic. Apart from pedagogic use of computers can be used for knowledge generation and dissemination with the help of IT.

The educational uses of the Internet can be classified into two major categories. The Internet, undertaking the goal of acquisition of skills and knowledge, sometimes represent content and at other times tools. In the course on the use of network technologies and services, and ways of using their potential, the Internet may be the content. This mode of use can be labeled 'Library Networking'

According to the **UNESCO report Learning: the Treasure within (1996)**, the function of higher education is as follows:

1. University should be central to the higher level of the system
2. To prepare students for research and teaching
3. To provide highly specialized training courses adopted to the needs of economic and social life
4. To be open to all so as to cater for the many aspects of life long education in the widest sense.
5. International cooperation.

There are about two hundred twenty universities and seven thousand colleges (both UG & PG) in India, majority of them being funded by the U.G.C. and respective State Government. In the 8th Plan INFLIBNET is a major project which is to interlink 180 universities and 7000 college

libraries. Unfortunately the project has not caught up with the proposal. Most of the university libraries in U.P. State at present house innumerable books, magazines, journals abstracts, reports, theses and other non-book material on practically every branch of knowledge and additions have been made every year to the existing stock. All of these occupy a great deal of space and the processing it, for all practical purposes manual. Classification and indexing the present stock as well as those that are added annually consume a great deal of effort, time and resources. Out of them only very few books / journals are being microfilmed at present. It may further be stated that the university library stands isolated from the rest of the communications because of its elitist nature. Only the person who approaches the university library will get the required information after going through un-ending indices and the rows and rows of racks of books. Further, there is a great disadvantage of research scholars of a particular place wanting to know the nature of material available elsewhere because of the absence of network facilities.

Most of the university & college libraries in U.P. State are in much worse condition. Many college libraries are in a deplorable state without having even such basic amenities as shelves and technical personnel. There is need to improve the conditions in these libraries particularly in the context

of explosion of knowledge and information in all disciplines. For the university libraries to become more efficient and accessible to as many scholars as possible and for this purpose automation has to introduce right away. This is essential to reduce the effort in collecting information, the time taken to locate it and resources spending.

The following few points briefly elucidate the various factors which have been affecting the change in library and information services.

1. In ancient times libraries were regarded as storehouse of knowledge and the services aspect was neglected largely. After the Second World War, dissemination of information has gained significance. The society has become more information conscious. To serve the information needs of diverse populations, different types of libraries, viz. public library, academic library and special library has emerged.
2. Political and economic factors play an important role in changing the scope of library and information services. The concept of globalization has opened the library and information service to wider community.
3. The innovation in information technology has brought changes in LIS. Today it has become a common place for computer applications in

information processing and retrieval. The technological innovations like networking, Internet, e-mail services, etc. have made information accessible to the user community worked over, promoting the concept of global village.

4. The limitation of finance, staff and equipment's placed greater emphasis on adopting new management techniques by the library and information professionals. The change in management techniques requires specialized skills to be imparted to the information workers.

A survey was conducted by Aligarh Muslim University in the states of Uttar Pradesh to find how computers were used in libraries. As the most of the university libraries were not using computers is also insignificant. The reasons for this low use may be lack of technical support to the professional developing computer aided material and availability of relevant hardware and software. However, few of the university libraries serious efforts have been made to use of computer.

4.8 Impact on University Libraries

The single force that has brought revolutionary changes in functioning of libraries is information technology. Libraries use IT to increase the efficiency and effectiveness of their operations and services. IT has

virtually immense potential for a variety of applications in libraries. IT helps libraries in creating databases of their collections and making them available for easy access to users inside as well as outside through networks.

In an automated library, once databases are developed in the computer, many services like bibliographic service, indexing services, CAS SDI etc will be automatically generated from them the users can have direct access to them. IT offers a variety of computers based information products and services including access to external databases. CD ROMs etc. Networking has enabled libraries to share their resources more effectively, especially in the present days of increasing documents prices and decreasing library budgets.

IT enables libraries to provide most efficient and specialized information services. It has been fairly established that efficient information support and effective communication in an organization are closely associated with high performance, productivity and innovation. A study² on how IT can

² Soonchul, Lee and Michel, E. Treachy. "Information Technology impact on innovation" R&D Management v.18 no.3 (Oct.) 1988, pp.257-271

affect the ability of individuals or organization has found that IT enhanced innovation significantly by augmenting individual/ group capabilities through motivation support, resources support and information support. Among the three, motivation support was found to be the strongest factors. A Survey by Hayter and Heery on impact of IT on senior managers in academic libraries in UK showed that nearly 60% senior staff have computer of some description in their office. Computerized activities include writing preparing reports, sending and receiving e-mail, on-line information gathering and maintenance of personal diaries and databases.

Computers can be used in performing most of the repetitive works of library ion a desired number of times speedily and economically without fatigue and wastage of time. A study conducted on the use of computer in libraries of higher education showed that the time taken in processing 500 books in a library manually as well as through computer was 1000 hours and 60 hours receptively. The point to be noted here is that time required for typing/ data entry was the same number if 40 hours for both the systems. These shows that a computerized system is about 50 times cost-effective compared to non-computerized one for the university libraries. Most of the operations with in library are inter-related, interdependent and mutilate supportive for the overall mission of the library. Use of IT

applications to interface and integrated each function with the other saves lot of staff time as the same data need not be entered at every stage. Data once entered in machine-readable form can be used repeatedly in different operations for various purposes. The use of IT with its immense capabilities of acquiring, storing, processing, retrieving and disseminating information with high speed and accuracy has made a tremendous impact on the overall functioning of libraries in the country.

The information consumers who are library clients-actual and potential should be made aware of the application of information technology in library services. The major concern must be of developing manpower trained in information technology, of educating the existing library staff and maintaining continuing education given the changing nature of the information technology.

4.9 Areas of Information Technology

Very few of State University Libraries in India are using IT for various library operations. The State university libraries can use IT for its various library services and operations such as acquisition, cataloguing, circulation, serials control and information services etc. for better

utilization's of library resources for the maximum satisfaction of 'consumers.'

Followings are some of areas where IT can be initiated successfully by the State libraries:

4.9.1 Acquisition: Computerized acquisition helps in selection, ordering, procuring books and other library materials. It helps in preparing subject-wise budge allocations. While selecting, ordering, accessioning books, libraries will be using most of the same bibliographical details of documents, such as, author, title, imprint, collation etc. In this process, computers enable libraries in making use of the same data available in different files without entering it again each time. In this way, computers helps in performing the following important activities in acquisition.

- Processing purchase requests
- Pre-order searching
- Approval process
- Placement of orders
- Receiving and accessioning documents
- Invoice Processing and payment arrangement
- Order follow-up and on-line enquires

- Preparation of reports

4.9.2 Cataloguing: Cataloguing is one the important functions which links the users requirement to the documents in the library. Computerized catalogue is the most efficient tool in retrieving information about the documents in a library easily and quickly. Catalogue of holdings can be prepared easily on the computer by importing the bibliographical details of the documents from acquisition file with additional data from library staff. Once the catalogue of holdings is available on the computer, the documents can be searched, retrieved and rearranged in any way as desired. The time consuming work involved in the following activities are significantly reduced by using computers.

- *Catalogue cards production*
- *Catalogue maintenance*
- *Thesaurus construction*
- *Indexes - authors, keywords, etc.*
- *OPAC*

4.9.3 Serial Control: Computers help in periodicals subscription and subsequent monitoring of the receipts of individual issues. In computerized serials management, it will be easier to detect and contrail

the no-receipts of the periodicals issues by sending timely remainders to suppliers. It helps in maintaining record of budget sanctioned and amount expended for different categories of serials. Computerized serials control helps in creating a database of journals with all the details.

- *Processing new subscriptions*
- *Processing renewal subscriptions*
- *Order placing and invoice processing*
- *Receiving and recording issues*
- *Claiming missing issues*
- *Bindery management*
- *Maintenance of list of periodicals*
- *Serials holdings*

4.9.4 Circulation: Circulation of documents is one of the important operations of a library. Circulation procedure in a conventional system is very lengthy and consumes much of the staff times in repetitive works. The use of technological devices such as computers, bar-code scanners and its software in circulation helps in performing these routine operations easily and quickly. It saves lot of time for the staff as well as users. It helps in maintaining up-to-date membership records and in finding out

latest status of documents under circulation. IT helps in the following activities in circulation.

- Issue and return of documents
- Renewal and reservation of documents
- Sending reminder notices
- Circulation and collection of overdue
- Maintenance of membership records
- Circulation statistic
- Stock verifications

4.9.5 Management Support: Library management needs information for taking right decisions. Information facilitates decision-making. Computerized library can provide information quickly on various library activities required by the management for the following purposes.

- Budgetary control
- Preparation of accounts
- Maintenance of records
- Library statistics
- Generation of reports

4.9.7 Information Services: Libraries are experiencing a significant impact of IT on information processing, source and services. Developments in IT made information sources available in different formats such as floppies, CD-ROMS, network, databases, multimedia etc. Libraries have to make efforts to facilitate users access to these information sources. IT has brought a revolutionary change in faster information communication across the globe resulting in a number of new information services. Use of information technology in library results in cost efficient and cost-effective information services. The following are some the important information services.

- Reference services
- Information search services
- Bibliography and indexing services
- Inter-library loan services
- Current awareness Services (CAS)
- Selective dissemination of information (SDI)
- Document delivery services

4.10 Problems of Libraries

The problems in application of information technology in library field or for its slow progress are many, out of which the few important ones are:

- Installation of computer in libraries is still considered as costly affair
- It lacks in sufficient trained specialized manpower to plan and operate automation in libraries.
- Non-availability of enough information technologies in India so as to facilitate automation in libraries and much responsibility lies on the shoulders of trained and well qualified library staff who could take initiative to introduces them.

Most of the university libraries in U.P. State of India, except few university libraries and special libraries, have not yet started utilizing / application of IT even in the house keeping functions of the library duet to inadequate finance and man power. It is observed that University Grant Commission (UGC) and State Government has been extending the financial help for the automation of the academic libraries in India. There are different types of software available for library house keeping functions. So all the librarians must get ready by keeping abreast of latest information technology in order to face the new challenge in information field.

Technology will undoubtedly pay a growing role in the library of the future. Nevertheless, librarians will continue to make their decisions in

the context of their overall needs and resources. Automation will continue to be the only a tool for the librarians to achieve the objectives and the answers to all problems.

There are certain competencies required in order to use IT. One must know self managed learning, scientific and technological terms, information handling, selection, retrieval and critical assessment of information, systems thinking and system design, inquiry exploration and experimentation. Librarians role have changed in the IT age whereas before the librarian was the source of information to the consumers, now the consumers has multiple sources, of information and the librarian is merely the guide and facilitator for all the information. Librarian in the higher education system will have to be trained in the use IT. They will have to shell off the resistance in the use of IT. Technology is only a tool, which has to be mastered one, should not be left out. With the use of IT librarian should not become isolated. Therefore, other competencies like, collaborative work, teamwork, use and management of multiple resources, flexible use of technologies is required as also job market orientation. It will prepare consumers by integrating technology with information centered. On the professional side it empowers librarians to manage change processes and thereby raise their professional standards.

4.11 Systematic Planning & Suggestion

Stage-wise computerization may lead a university library in the direction of development necessary in the present era of IT revolution. University library resources may be utilized effectively and efficiently. Decision on any matter can be taken quickly as possibility of accessing information is on-line. Internet facilities with wide horizon will give the university library opportunities to be connected anywhere without space and time barrier. E-mail service will increase efficiency. Libraries of the university will be resourceful. No one will be required to move anywhere else to have access to necessary books, documents, journals etc. However, following are suggested for stage wise consideration before implementation of computerization in the university library.

1. An incremental and sustainable approach is necessary, specially, regarding infrastructure, hardware, software and computer personnel.
2. Existing set up should be upgraded according to the need without loss of time
3. Software, infrastructure development and appointment of computer personnel should always be considered with priority along with the hardware requisition
4. Funding is very important factor to be met.

5. To be at par with other central university, the state university should try to implement the computer/Information Technology as soon as possible.
6. To develop skills and competencies in libraries in future economy prerequisites
7. To change the information according to the changing needs of consumers
8. To bring change in library services strategies for transaction of information in light of IT development
9. To remain competitive in the emerging global economy, librarian must become competent in information retrieval
10. Librarian's strategy must integrate higher education with world of work
11. To develop software, CD-ROM's and digital media repositories in particular areas
12. To develop IT based library services modules integrating the use of general productivity tools
13. To develop suitable guidelines for the classification and selection of existing technologies. These guidelines will help to track librarians to identify software and technologies that can be used for.

- *Extension and manipulation of data*

- *Activation and consolidation of acquired data*
- *Knowledge construction*
- *Communication and collaboration.*

The emergence of the high bandwidth digital communication networks makes this direction of university library services reform more viable. Success of IT in university libraries would depend on librarians. A systematic multilayer programme of librarians in the use of IT is central to the success of any programme on IT. Building the human infrastructure is a gradual process that should be designed and developed as a key component. It requires a strong pedagogical support system to support library users in various ways. That would need well-conceived plans at the apex level of higher education to ensure uniform quality standards. After all, we librarians should not forget the fact that our success is largely depend on our progress in the field of IT. This is the major responsibility of our university libraries. There is broad consensus that IT is shaping our university libraries. It is becoming increasingly the key to libraries economic development and well being of library users. Certainly to affect virtually every conduct and service through significant qualitative change.

Chapter : Five

***Consumer's
Care and
Effectivity***

CONSUMER'S CARE AND EFFECTIVITY

The information technology has shifted the role of a library from storehouse to gateway and reduced the whole world into a 'global village' providing opportunities for interconnections of databases and networks at national and international level, which has greatly influenced the consumers, Effectivity. With the advent of information technology countries are moving form industrial society to information society. The challenge of coping with the changes in social, technological, economical and political environments has forced the LICs to change their time-honoured old practices to satisfy the complex and ever-increasing information demands of their consumers. Hence, with emerging information technologies and virtual realities, we have reasons to ponder serious thought on the issue of consumer-focused approaches in the wake of accessibility of information services.

Information Technology and Internet are the latest techniques among the computer user now-days. Meaning of Information Technology is continually broadening its scope and spawning new specialized topics. That is one reason why it is fuzzy term, meaning different think to different people. There is no doubt, however, that it embraces large and ever increasing range of topics which we all the library and information

professionals, find it hard to keep up with. Hypertext, Teletext, Videotext, Relational Databases, Decision support System, Internet, digitization, Electronic Content Creation, Website creation and maintenance, Value added date services – the list of things we, the Library & Information professionals ought to be up-to-date with just keeps on growing. Many trends have been identified within IT. The rapid development of the technology itself, convergence and integration, the rise of the new concepts such as Electronic Document Management or Information Resource Management, the extension of the role of library, information and documentation professionals with in the organization are some of them.

Computers are changing the way we communicate and how we think about intellectual property and the ownership of information. It is forcing us to re-examine about information, libraries and librarianship. Many traditional library science schools are developed. Unless we could specialize in computer and communication technology application in library and information services the computer scientists or electronics and communication people who are prepared to do some specialization in library and information science will take up the responsibility for library and information system management.

5.1 Concept of Consumer's

Till recently consumers care was considered as a synonym to after sale service. But in the recent past it has grown in dimension and today got the status of a marketing tool to assure operational efficiency and consumers satisfaction by ensuring that products and services reach the consumers on the right time in right quantities and specifications.

The consumers care can be defined as 'meeting agreed consumers requirements fully.' It is not just aim to meet the material needs of customers but goes beyond it to satisfy his psychological needs as well. Hence, it includes all activities involved in making it easy for consumers to reach the right parties within an organization to obtain services, answer and re-solution of problems. In other words it is process of taking care of consumers in a qualitative way.

As marketing tool consumer care programme should aim at consumer's maintenance, consumer's retention and new consumers development. It helps an organization like library to develop reputation that induces consumers to be more committed towards the university. The committed users may recommend such library to prospective or consumers-based.

So, using the satisfied consumers as a media, the organization can reduce the material and human resources needed for promotional activities.

5.1.1 Consumers

There have been a great number of user studies during the last many decades. The number of reviews and bibliographies on user needs, user studies and information seeking behaviour is growing steadily as this art of information science is of great interest to researchers.

When information on users studies are analyzed, different aspects emerge such as: the discipline, literature use, library collection use, information seeking behaviour, information needs, wants, demands, requirements and scientific communication. Each aspect of these can be studied in different ways with different methods. The common factor among these types of study is the 'consumer' who is the core of this information system and his satisfaction is ultimate goal of the system analysts and designers.

'Consumers' are individuals; a statistical average value can be very misleading. Nevertheless, in designing information systems we must classify groups of consumers. These 'types of consumers' is a set of particular information needs and not a group of class of people.

Individual can belong to several types of users. Noting: that a definition of term 'User' is often neglected, **Kuntz, Rittel and Schwuchow** distinguish four categories:

- **The 'Potential User'**: he is one who needs the information, which is to be provided by the specific services of an information facility.
- **The 'Expected User'**: someone who is known to have the intent of using certain information services
- **The 'Actual User'**: one who has actually used an information service, regardless of whether or not any advantage was derived from it.
- **The 'Beneficiary'**: someone who derives measurable advantage from information services.

5.1.2 Information Consumer

Information is considered a basic national resource. Every bit of information is as essential as minerals and other natural resources for 'consumers' for the development of any university or institution.

The dynamic growth of knowledge, growth in the number of 'consumers' diversified nature of consumers requirements, escalating cost of

documents etc. are major problems to university librarians and libraries to provide a need-based information service to their clientele.

The library environment of consumers is the last link among recipients of the information in the communication cycle. For an effective information service a university librarian should ascertain about the information requirements of his consumers. In fact he should understand the following: Who are the consumers? What are their needs? Capabilities of consumers? Nature of consumers? Is he an undergraduate, postgraduates, researcher, teacher or university administrator?

5.2 *Need*

Consumers satisfaction remains far from the expected levels in most university libraries due to the system oriented approach for the library administrators. In the long run, by neglecting consumers satisfaction, no libraries can withstand the challenges posed by the information industry. Since a good consumer care programme aims at achieving better consumers satisfaction, such a package is needed for every university library due to following reasons.

1. To ensure better consumer satisfaction.

2. To give credence to the library policy to be a cent percent consumer-oriented university.
3. To develop good rapport with the consumers and thus ensuring a long and harmonious relationship.
4. To accelerate university libraries market development
5. To give a competitive edge in competition
6. To users satisfied as a media for promotion of library services
7. To create consumers loyalty
8. To improve employees morale and productivity
9. To reduce library staff grievances, absenteeism and turn over
10. To retain a human touches in an era of high-tech.

Consumer's requirement drives the quality process understanding the consumers in terms of attitudes, value requirements, desire, etc. Each library must asses its consumers, their needs, service to satisfy these needs, and the framework or context for information services. This requires a change in the mindsets. The process of identifying the internal consumers is itself a very enriching experience, and is sure to motivate the behind- the - screen staff to provide the best to the colleagues, and in turn, to the systems.

5.3 Consumer-Focus Approach

The subject of consumer-focus coming to library and information science is very attentive. Libraries and other information services practitioners are seriously thinking about consumers-focus and that is the way the term like 'customer' and 'client' begun to replace library's users, 'patron' and charmingly quaint (or so it seems now) 'readers.' Due to the impact of information technology in our society marketing of information is widely welcome. Marketing of information is also to satisfy the consumers needs as and when arise. Actually, the concept of 'consumer-focus' is market driven. Contemporary marketing is consumers focused, which reflects the change in approach to customer service, which has taken place during 1990s. Customers are not becoming accustomed to good customer service in many aspects of their lives. At one time, the aim was to 'have happy' customers. Then we were expected to have 'satisfied' consumer, but now we are exhorted to 'delight' them.

5.3.1 Consumers Profile

Now a days, information consumer is a much different person that the patron of just a few years ago. Advances in IT have raised their exceptions of information to a great extent that ever before. He is fully

conscious of his right to get quality of information products and services and even ready to pay for that, if they value for them.

Dunckel identifies the following demographic criteria, which affects customers' expectation about customer's services:

1. The general population is becoming more customer-oriented and at an earlier age than ever before in the history.
2. People are healthier and living longer, we are consumers for longer.
3. Customers are more sophisticated. They not only have more disposable income, but they are better educated, more informed, have higher expectations, and are aware of their rights and options in the market place.

There are very basic, very pragmatic reasons for looking at information services in term of customer's services. Pressure is coming form the customers themselves.

5.3.2 Consumers Groups

Delighting customers involves a lot more than just meeting their information needs, and ensuring that all aspects of their experience of dealing with the LIS are at or above a standard, which they have helped to set. This involves use of consumer-focused marketing techniques of

segmentation, which enables us to understand the need of groups of consumers in the required depth. Without it, we are likely to treat all consumers the same, which is a sure way of not satisfying - let alone delighting - a number of them. There will be definitely some consumers whom we will find more valuable than others will, and / or whom we can serve more effectively. In order to decide who they are, and how we serve both categories and others, we need certain key information:

- Who are consumers?
- What are consumer's characteristics?
- What triggers consumers decisions to use LIS
- What service do consumers want now?
- What services will consumers want in future?
- What are consumer's perceptions and expectations?
- What benefits are consumers looking for?
- What are consumers buying factors?

In marketing term, this will enable us to decide how big the market place, i.e. consumer base is, and how much of it we want to capture and what services we are going to offer in order to achieve that.

5.4 Consumer's Oriented Service

Having identified the target consumer groups, we have to design and deliver the information products and services in a manner that suits almost all needs of our consumers. What this calls for, in terms of information delivery, is a clear understanding of consumer's perceptions and expectations about information services. That means we have to base the design and delivery of our services as far as possible on what the consumers want, not what we happen to have available, which justify the availability of right information at right time to right consumers in right format.

5.5 Identification of Information Needs

The information resources development in university library should start with the identification of consumers - potential, expected, actual and beneficiary - and their information needs. The needs of consumers - expressed / articulated, unexpressed and demand need- depend upon their work activity, discipline/field / area of interest, availability of facilities, hierarchical position, motivational factors, need to -seek new ideas, validate the correct ones, make professional contributions, establish priority for discovery and need to take decision. Their needs are also affected by several other factors such as availability of information

resources, internal and external information facilities, the uses to which the information will be put, the background, professional orientation and other individual characteristics of the consumers of information. In order to have a clear insight into the actual information needs of consumers; one should adopt various methods to gather information on many factors, which influence information needs. Of course, no single method or tool will be useful, but a careful handling of several techniques depending on the consumers whose need being studied is necessary.

The major steps in the process of identification of information needs includes study of subjects or organization and its environment, consumer's specific environment, on and about consumers, formal interviews and followed by analysis and identification of information needs. The first step is to identify and make a detailed study of core, peripheral and supporting subjects / disciplines and sub-discipline of interest to the organization following the methodology of studying a subject will help in better understanding of the structure of the subject and guide in identification of information needs

The second step is to study the nature and type of organization and its environment and prepare a detailed profile of organization comprising its

overall objectives, functions and the factors that affect its functions including different divisions of the organizations.

5.6 Quality of Services

Quality means "to meet or exceed the needs and expectations of the consumers in the most cost-effective way." It has four basic elements, which are

1. *Consumers expectation*
2. *Competitions*
3. *Cost, and*
4. *Technology.*

With in the competitive economic environment, it is necessary to satisfy not only the stated requirement of the consumers, but also the implied needs. The good quality library services makes sure that, quality is every one's responsibility and a part of every activity. A good quality system ensure also consistency of products and services and guarantees the utilization of same materials, same equipment and same method and procedure every time in the same way. Quality services especially in case of university library have three key aspect like-Management responsibility, Personnel and material resources and quality services structure. The following guiding principles of quality services are:

1. Meeting the requirements of the customers both internal and external, on time and with full satisfaction
2. The involvement and commitment of every individual to achieve quality
3. Quality is built in to the process and it comes through prevention rather than cure
4. Quality is measurable and it can be measured by non-conformance.

5.7 Characteristics of Quality Services

The following are the key characteristics of the quality services

- To become consumer-driven rather than self-focused
- To concentrate on process rather than be preoccupied with results
- Use workers heads in addition to their hands
- Total involvement, contiguous improvement and leadership commitment
- Quality Services is a human relations-oriented philosophy that requires fundamental changes in library management, treating them as an ever-appreciating asset.

5.7.1 *Output*

Quality library services gives the following benefits to the university library and satisfy consumer's requirements.

1. Better product design and improvement of confidence among users
2. Developing an inventory of all the documents available in a library
3. Developing a database, which includes consumers for all types of materials in library
4. Improving quality of information analysis and consolidation products
5. Improving skills of and users to profitability interacts with information system and services
6. Integrating and networking all library resources into serviceable resources to consumers
7. Reduction in consumers complaints and efficient utilization of men, machines and materials, resulting in higher productivity.

5.7.2 *Quality Management*

The ultimate aim of a university library is to satisfy the information requirements of its consumers. The very nature of information services has to change according to technological changes. In order to meet the changes there should be a change in techniques in the management of the university library.

In today's world customers / consumers prefer only high quality products and services. They are even ready to pay for the same. Users of information have the same attitude with regard to information also. They expect information products and services of high quality. A better way to procure quality information is to continually improve people, processes and environment of the university libraries effectively by inculcating principles of Quality Management

5.7.3 Benefits of Quality Mnanagement

According to **Miller and steams**, the principles of quality management, if implemented carefully would yield immense benefits a university library such as:

- Incremental changes leading to continuos improvement
- Forces university librarians to develop leadership skills to obtain effective results
- Increase staff participation in decision making
- Improves the level of training given to staff, thus increasing their skills and abilities
- Helps to break down barriers between library departments and improves communication with in the library

- Provides a methods of improving services to consumers
- The time taken to provide information services decreases and the efficiency increases.

5.8 Problems of Libraries

The Report of the Planning Commission's Working Group on Modernization of Library Services and Informatics for the year (1985-90) has brought to light the major problems faced by libraries, information centers and systems in India.

Some of the problems faced by university libraries in India are: The information resources of libraries are inadequate and print media predominates. The high and mounting cost of information resources and cost of processing and organizing it for use are increasing. There is a demand for wide range of information resources both from internal and external sources due to growth of knowledge. The financial resources are not only limited but funding provisions varies to a greater extent depending on the nature, types and size of the organization. The majority of the libraries in general are not getting even the minimum services to the clienteles. There is a requirement to serve more number of consumers than before. The lack of strong commitment on the part of universities to

provide the required support and infrastructure facilities - physical, communication and computer facilities to take best advantage of information technology in providing access to information resources worldwide. The problems in attracting and recruiting right type of professional staff to do the right type of job and to meet the ever changing information needs of consumers in the changed scholarly and publishing environment. Although many library networks have come into existence in India but the libraries are yet to utilize much from these networks. The professional working in libraries with few exceptions in special libraries is unsuited to changes involving use of computers and information technology. Besides the most of the libraries are developed along the traditional lines that too for serving bibliographic information in passive way. These problems are not new, but they have become much more very serious over the years and have in the last few years reached most critical proportions.

5.9 Consumer's Care & Libraries

Consumer care is the new standard by which consumers judge an organization. To man organizations it can be more important than their products, services and promotional methods. Since it is tool to assure consumers satisfaction, in the competitive environment, libraries can use

consumer care to bring the users again and again to the library. For this, library management needs to amalgamate technical professionalism with marketing professionalism. Consumers care (CC) can be offered in university libraries in the following forms.

5.9.1 Professional Assistance

Today the general trend in university libraries is to go high tech., As a result more and more operations are getting automatised. Management consultant **John Tschohl (1997)** says that the more often we are forced to interact with machines, the greater will be our yearning for human contact. Through consumers care libraries can provide human assistance in professional matters like using INTER-NET, E-mail, OPAC, compilation of bibliographies, formulating search strategies, using compact disc CD-ROM etc.

5.9.2 Promotion and Communications

As a media, consumers care (CC) can be used to create awareness about the products and services offered by university library. To achieve this libraries can conduct personal orientation sessions to the new members at the time of admission or to the whole members when the library intends to introduce a new service. The personal contact thus made can install

confidence in library professionals and may initiate interaction between staff and users in future. From such interactions library administrators can extract essential feed back data to assess the specific requirements of users groups to reorganize their products/ services. The frequent interactions can create a cordial and healthy working atmosphere.

5.10 Suggestive Model

A 'model' of the service triangle can be used to design consumers care programme in libraries. According to this model, the triangle is formed with service strategy, staff and the system around the customer. Customer is the core of the model and every thing - the strategy, people policies and support systems must be planned and implemented with customer satisfaction in mind. So, service strategy, users friendly system and customer friendly employees are the basic elements of the model. Strategies are general programmes of action and development of resources to attain comprehensive objectives. In case of service institutions it is the services strategy which directs the organization whom to serve, what to serve and how to serve. To prepare a strategy for libraries, the management has to go through several steps. The process starts with the identification of target groups by determining the proportion of individuals already demanding the services and the proportion that will never be

interested. E.g. students, teachers and research scholar form the target group of a university library system. Once the target groups are identified, the next step is to identify their information needs. Most often users are offered with services, which the management perceives best for their consumers. This is subjective approach. To make it objectives, library management has to conduct a well-planned user analysis to bring out the exact information strategic information a user friendly and adaptable system can be designed to perform operations. The last but surely not the least is to develop a consumer-oriented front line staff capable of connecting the consumers and the system in an efficient and effective manner.

5.11 Conclusion

In view of the fast development technology, does the libraries feel uncertainty about what the future holds for them? It is true that as a result of such continuous development, the future profession of a librarian will be different and the traditional skills will have to use in a different way. In this rapidly changing environment there is no common place for the local librarian as an information intermediary. As far as users are concerned, they always need some one in an advisory role who can be called upon when necessary and they also need expert advice on the information

sources available in new areas. This may be what the future librarian may be like i.e. a professional to whom users turn for help and advice on search techniques, database quality, database development and the range of database access that is available.

Access to library services from outside the library building is becoming increasingly popular these days and with the availability of on-line help packages, users seek minimum assistance from the librarians. This is certainly an emerging pattern in most of the university libraries of the west, where the users are directly using computer networked services.

The convergence of library and computer services highlights the need for training of these information professionals. The librarians' overall knowledge of information sources should therefore prove an important asset to the wider community when they seek broader approaches to their problems.

Following are some suggestions, which must be taken to implement consumer-focused approaches in actual practice in the university libraries, for which we have to:

1. To establish clarity about mission of information services by making them consumer-oriented, bringing the consumer in picture.
2. To set - up a 'consumers service' or 'consumer care' unit in university libraries to like after consumers needs and wants for information
3. To adopt marketing techniques to identify the market, i.e. the consumer-base in internal as well as external environments.
4. To identify the needs, wants and demands of the consumers, i.e. to develop a user-profile by conducting users' survey.
5. To look at the information products and services through the user's eyes
6. To identify, design, package and promote tailor-made information products and services affordable to the pocket of consumers to satisfy them
7. To be alert with the competitors in the information business.
8. To add value to information in terms of ease of access, quality of service and speed of delivery
9. To train, develop and empower the library staff to work for the consumers
10. To listen, understand and respond to the consumers

11. To develop a unique relationship with the consumers and treat each one as someone special and
12. To use problems as opportunities to demonstrate just how good the information services unit can be.

These steps will not involve much expense, only the sheer will to execute them in organized manner will do them happen in reality, as that is the only way to satisfy the consumers and maintain consumers effectively.

Chapter : Six

***Analysis
of
Data***

ANALYSIS OF DATA

As mentioned in Chapter-1, two questionnaire were designed and distributed to the 'Library Staff' and 'Library Users' of all 9 State Universities of Uttar Pradesh i.e R.M.L. Avadh University, University of Lucknow, Gorakhpur University, M.G. Kashi Vidhyapeeth, Varanasi, Sampurnanad Sanskrit Visvavidyalaya, Varanasi, SSM University, Kanpur, Dr.Bhim Rao Ambedkar University, Agra, Chaudhry Charan Singh University, Meerut and Bundelkhand University, Jhansi to collect data on (i) existing systems and practices in university libraries and the future planning with regard to the Information Technology (ii) to know 'users effectiveness due to induction of new Information Technology. The User Survey was divided into sections and sub-sections, which contained variables describing the nature of library, their users community, the library activities, their financial resources, their collection, years of establishment, use of information technology by them, the kinds of library services offered, whether manually or with the help taken from computers. The data by circulating questionnaire collected 577 library users of various disciplines constitute 80% of response to the questionnaire circulated, for used and 150 library staff of different university libraries which form 85% of response to the questionnaire circulated, and through personal visits and personal interviews from the

university librarians and specific library users has been analyzed and interpreted in the paragraphs that follow.1 Library Survey 2. Users Survey.

6.1 Age Groups of Users

It has been seen that the younger generation of users is better exposed to the mechanized literature search than the older people. Fischer the young people may show less reservations for spending money for what they get from information technological services where as the older peoples show more reservahon as spend in a very calculated manner for the use of modern and advanced technology. Hence, the age factor has been identified and included in this question. The data collected has been analyzed in Table No.1

Table No.1

TABLE SHOWING AGE GROUPS OF USERS

S.No.	Age Group of User	Nos. of Users	% of Users
1.	30 Years	138	23.9%
2.	Below31-40 Years	359	62.2%
3.	Above 40 Years	80	13.8%
Total Nos. of Users Survey = 577			

It is Observed that :Majority of users 359 (62.2%) of the respondents

were in the age group of less than 30 years 13.8% users were more than 40 years

6.2 Users Area of Specialization

With a purpose to identify the 'Effective Groups' in different area of specialization this variable was identified and formulated as part of this question. Of 577 users surveys the analysis of data reveals that majority of library users (41.2%) gives their opinion were from Social Science followed by 180 (31.1%) from Natural Science. Least number of opinion were received from 159 (27.5%) Humanities. The following Table-3 shows the users area of specialization.

Table No.2

TABLE SHOWING USERS AREA OF SPECIALIZATION OF EACH UNIVESITY

S.No.	Name of University	Social Science	%	Humanity	%	Natural Science	%	Total Nos. of Users
1	RML	28	46.6	26	41.9	14	23.3	60
2	LU	26	41.9	14	22.5	22	36.6	62
3	GU	29	42.6	20	29.4	19	27.9	68
4	MGKV	27	39.7	15	22.0	26	38.2	68
5	SS	24	36.92	18	27.6	23	35.3	65
6	SSM	30	46.8	9	14.06	25	39.0	64
7	Dr.BRA	26	41.9	22	36.6	14	22.5	62
8	CCU	20	29.4	29	42.6	19	27.9	68
9	BU	28	46.6	14	23.3	18	30.0	60

Table No.3

TABLE SHOWING USERS AREA OF SPECIALIZATION: CUMULUTIVE

S.No.	Area of Specialization	Nos. of Users	% of Users
1.	Social Science	238	41.2%
2.	Humanity	159	27.5%
3.	Natural Science	180	31.1%
Total Nos. of Users Survey = 577			

- **It is Observed from that:** The maximum numbers of 238 (41.2%) out of 577 users in university libraries in UP covered by this study are from the field of social science.

6.3 Educational Qualifications of Users

Educational qualifications of users, is another factor, which impresses upon the use of university library. It is observed that the higher levels of qualifications a hand universities library me fequeul making use of the library services. Hence, this variable was identified and formulated as part of this question. The data collected from 577 users from 9 - University library has been analyzed in the Table No 4.

Table No.4

TABLE SHOWING EDUCATIONAL QUALIFICATIONS OF USERS

S.No.	Educational Qualification of the users	Nos. of Users	% of Users
1.	Under-Graduate	258	44.7%
2.	Post-Graduate	139	24.0%
3.	M.Phil.	100	17.3%
4	Ph.D.	80	13.8%
Total Nos. of Users Survey = 577			

The analysis of data reveals that 44.7% out of 577 users were undergraduate followed by 24.0% Postgraduate. While Pursing M.phill and ph.D are users 17.3% and 13.8% respectfully

6.4 Sex Group of Users

The two groups of users - male and female - create different types of pattern of library use. The female group gets much lesser time, after attending to their domestic, family, social and other such obligations to make full use of the library. The male group, on the other hand, is many times compelled by their job requirements to use library products and services, in performing duties as decision-maker, teacher, students, researcher, or worker in any such capacity. The females also, who have

moved beyond the four walls of the house and engaged themselves in outdoor duties, make use of library services to a considerable extent. Considering such factors this variable was valued as a part of this question. The data collected has been analyzed in Table No.5. Which indicate that male users (67.7%) 2:1 are more than female users (52.3%) cenritutinp male female rah.

Table No.5

TABLE SHOWING SEX GROUP OF USERS

S.No.	Gender	Nos. of Users	% of Users
1.	Male	391	67.7%
2.	Female	186	32.3%
Total Nos. of Users Survey = 577			

6.5 Catagories wise

Identifying and studying the user community, is the basic requirement to identify the basic needs of users. For the purpose of this study, five main categories of users, both actual and potential were identified, and then various subcategories under each main category were identified and formulated as part of this question. Data collected form 577 library users has been analyzed in the table a below table:

Table No.6

TABLE SHOWING CATAGORIES OF LIBRARY USERS

S.No.	Catergies	Nos. of Users	% of Users
1.	Teacher	30	5.1%
2.	Researcher	50	8.6%
3	Students	391	67.7%
4	Administrative Staff	30	5.1%
5	Others	76	13.1%
Total Nos. of Users Survey = 577			

The analysis I data reveah that

- The large majority 391 (67.7%) of 'users' belong to community students of the university an compaued to teacher of adminisheine staft(5.1%) only 50 users beleng reseach Community which users from other categories . Corual visiter from the public & other coustitule 13.1% of the table users

6.6 Library Collections

Collection is an important part of the university library. It play a vital role in the development of higher learning. Generally, a university library collection consists of books, Jouesuals, serials including back volumes, dissertations, thesos and other non-book material. Books are

useful to all types of users, but serials and dissertations are necessary for research scholars and teachers. In view of the selection and collection of material appropriate for libraries and dissemination of the material or the information to the user the information of library collections has been analyzed and tabulated in Table No.7.

Table No.7

TABLE SHOWING LIBRARY COLLECTIONS

Name of Unity	Year	MS	Bound Periodi	Current Periodi	Books	Reports	Microfo rms	Others
R M L	1993-94	NA	06	07	360	69	03	N.A.
	1994-95	NA	07	09	363	378	N.A.	N.A
	1995-96	NA	09	19	374	188	N.A.	N.A
	1996-97	NA	12	17	407	342	02	02
	1997-98	NA	19	24	614	1558	01	03
L U	1993-94	NA	61	500	508000	6	NA	NA
	1994-95	NA	242	478	524000	19	NA	NA
	1995-96	NA	469	496	7346000	13	NA	NA
	1996-97	NA	515	500	7000000	17	NA	NA
	1997-98	NA	620	702	500000	16	NA	NA
G U	1993-94	NA	690	750	267000	193	NA	NA
	1994-95	NA	762	740	269153	119	NA	NA
	1995-96	NA	712	693	271419	203	NA	NA
	1996-97	NA	698	622	272016	247	NA	NA
	1997-98	NA	619	613	274347	291	05	NA
M	1993-94	NA	530	674	187500	57	NA	36
G	1994-95	NA	513	593	188102	93	NA	NA

K	1995-96	NA	617	598	188917	123	NA	19
V	1996-97	NA	579	612	189913	107	NA	193
	1997-98	NA	613	609	192469	141	NA	198
S	1993-94	1640	262	135	177320	NA	NA	900
	1994-95	1221	120	79	178568	NA	NA	960
S	1995-96	1024	60	65	179907	NA	NA	760
	1996-97	760	64	69	181372	NA	NA	190
	1997-98	365	62	72	181704	NA	NA	60
S	1993-94	NA	200	40	45000	10	10	300
	1994-95	NA	200	50	45709	50	22	400
S	1995-96	NA	250	50	46218	30	30	1500
M	1996-97	NA	350	55	52327	20	80	2500
	1997-98	NA	400	60	56319	50	100	1000
B	1993-94	NA	NA	318	190169	317	NA	NA
	1994-95	NA	NA	310	192453	297	NA	NA
R	1995-96	NA	NA	302	195312	363	NA	NA
A	1996-97	NA	NA	270	198987	397	NA	NA
	1997-98	NA	NA	195	199106	376	29	NA
C	1993-94	NA	290	324	83249	216	NA	NA
	1994-95	NA	310	326	84261	267	NA	NA
C	1995-96	NA	312	305	87225	310	05	NA
U	1996-97	NA	319	319	88682	417	09	NA
	1997-98	NA	320	342	89917	396	17	NA
B	1993-94	NA	92	110	9200	NA	NA	NA
	1994-95	NA	103	143	9619	NA	NA	NA
U	1995-96	NA	129	133	10413	NA	NA	NA
	1996-97	NA	146	149	11719	NA	NA	NA
	1997-98	NA	143	131	14109	NA	NA	NA

The above table shows that the total current stock of books with all the university libraries is increasing with an moderate rate. This works out to a meager annual growth of 5%. The Lucknow University Library is on the top of the list with 6.5 lakhs of books followed by 620 periodicals. The lowest numbers of books are available with 1409 at Bundelkhnad University. The next largest collection is of back volumes of serials, at 691 at Gorakhpur University. A total of 376 dissertations/theses are of stock across the State University Libraries of Dr. B.R. Ambedkar University, Agra.

6.7 Library Budget vs University Budget

Data on the budgets allocation for the libraries from university budpet as whole for the period from 1993 to 1998 is tabulated in the table no. 8.

Table No.8

TABLE SHOWING UNIVERSITY BUDGET & LIBRARY BUDGET

Name of university	Year	University Budget (Rs. in Lakhs) (1)	Library Budget (Rs. in Lakhs) (2)	Ratio 1 as of 2
R M L	1993-94	123.04	NA	NA
	1994-95	139.12	3.51	2.52%
	1995-96	149.56	3.96	2.6%
	1996-97	NA	NA	NA

	1997-98	262.19	7.31	2.78%
L U	1993-94	116.62	NA	NA
	1994-95	NA	NA	NA
	1995-96	137.19	4.50	3.28%
	1996-97	219.13	4.50	2.05%
	1997-98	253.23	4.00	1.5%
G U	1993-94	106.70	3.00	2.81%
	1994-95	NA	NA	NA
	1995-96	176.00	4.12	2.34%
	1996-97	NA	5.37	NA
	1997-98	NA	10.00	NA
M G K V	1993-94	235.16	NA	NA
	1994-95	NA	NA	NA
	1995-96	412.23	25.00	6.06%
	1996-97	613.17	10.00	1.63%
	1997-98	332.00	03.5 ¹	1.05%
S S	1993-94	327.00	3.75	1.14%
	1994-95	349.90	NA	NA
	1995-96	362.23	3.13	0.86%
	1996-97	NA	4.16	NA
	1997-98	NA	NA	NA
S S	1993-94	267.56	1.00	0.37%
	1994-95	287.13	4.00	1.39%

¹ In addition to that UGC grant sanctioned during the VIII 5-Year Plan was Rs. 25.00 Lakhs

M	1995-96	NA	2.00	NA
	1996-97	NA	2.00	NA
	1997-98	317.56	17.00	5.35%
B R A	1993-94	798.34	6.00	0.75%
	1994-95	846.92	6.25	0.73%
	1995-96	NA	6.50	NA
	1996-97	NA	NA	NA
	1997-98	912.13	7.12	0.78%
C C U	1993-94	698.00	12.12	1.73%
	1994-95	743.12	14.56	1.95%
	1995-96	819.57	15.92	1.94%
	1996-97	NA	16.19	NA
	1997-98	698.00	16.32	2.33%
B U	1993-94	167.98	1.15	0.68%
	1994-95	173.73	1.40	0.80%
	1995-96	179.93	NA	NA
	1996-97	203.56	1.70	0.83
	1997-98	400.00	1.15	0.02%

A survey of library budget of Nine State University Libraries of Uttar Pradesh reveals that during 1997-98 the university libraries were granted a small amount of budget in comparison to university budget.

It is quite evident from the analysis of above table that budget position at

Bundelkhand University, Jhansi library budget is very low (1.12 Lacs) in comparison to university budget (**Rs.400 Lakhs**) of tablel university library given to university library which is even below one percent i.e. 0.02%. Lucknow University also has meayer financial back-up,as the university budget for year 1997-98 was **Rs.1016.62 Lakhs** while Library budget was only **12 Lakhs** which(1 .1%. of tatal university budpet).

The problem of all nine state university libraries in Uttar Pradesh is that of scarcity of funds. The State University Libraries have been running on considerable Lack of appropinate fraueial allocation for the last several years.

This uneven and under-funding is far below the standard funding norms for university library recommended by various bodies in our country.

- **Radhakrishanan Commission** Recommended **6¼%** of total budget of a university;
- **Kothari Commission** recommended **6 ½ to 10%** depending on the stages of development of each university;
- **Association of Indian University** suggested **10%**
- **Planning Commission's Working Group on Libraries** suggested **10 to 15%**
- **Raj Committee** recommended **20%**

6.8 Users Dis-Satisfaction

Six categories of reasons were identified and formulated, to clarify the not satisfaction problem, as a part of questions. The data collected from 577 reveals the reasons of users dis-satisfaction with library innovations has been tabulated in Table No 9.

Table No.9

TABLE SHOWING USERS LEVEL OF DIS-SATISFACTION WITH LIBRARY SERVICES

S.No.	Reasons of Dis-Satisfaction of the urers	Agree (%)	Disagree (%)
1.	Not Aware about Library Collection and Services	297 (51.4%)	280 (48.5%)
2.	Lack of Developed LIS Services / Products	338 (58.6%)	239 (41.4%)
3.	No CAS Available	378 (65.6%)	199 (34.4%)
4	Lack of New I.T.	427 (74.1%)	150 (25.9%)
5.	Less Time to use LIS	50 (08.6%)	527 (91.4%)
6.	Staff Attitude is not Cooperative	319 (55.2%)	258 (44.7%)
Total Nos. of Users Survey = 577			

6.9 Users Satisfaction

Five categories of satisfaction identified and formulated, to clarify the level of satisfaction with the library services, as a part of questions. The data collected from 577 has been tabulated in Table No 9.

Table No.10

TABLE SHOWING USERS LEVEL OF SATISFACTION WITH LIBRARY SERVICES

S.No.	Satisfaction Users levels of	Nos. of Users	% of Users
1.	Highly Satisfactory	130	22.5%
2.	Satisfactory	208	36.0%
3	Not Satisfactory	120	20.7%
4	Average	92	15.9%
5	Below Average	27	4.6%
Total Nos. of Users Survey = 577			

The data reveals that 130 (22.5%) were highly satisfy with library and information services provided by these university libraries followed by 208 (36.0%) satisfy and 120 (20.7%) not satisfy with library services. However, 92 (15.9%) and 27 (4.6%) were opine that library services are average and below average respectively.

6.10 Use of Library 'Length wise'

To clarify the effectiveness of use of library services, it is important to specify the using time of the user in the library. Six categories of the users were identified taking time duration and formulated as part of question in Table No.11. The majority of 199 (34.4%) users out of 577 in U.P. covered in this study were using their libraries four times a week, followed by 150 (25.9%) five times a week. Whereas 50 (8.6%) using the library each 'daily' and 'once a week.'

Table No 11.

TABLE SHOWING USE OF LIBRARY 'LENGTH-WISE'

S.No.	Duration of Library utilization	Nos. of Users	% of Nos. of Users
1.	Once a Week	50	8.6%
2.	Twice a Week	46	7.9%
3.	Three times a week	82	14.2%
4	Four times a week	199	34.4%
5.	Five Times a week	150	25.9%
6.	Daily	50	08.6%
Total Nos. of Users Survey = 577			

6.11. Use of Library 'Purpose wise'

To be aware of the user needs and fulfil those needs; it is necessary for the university librarians to study the purpose of using the library by the user. 7 categories of reasons were identified and formulated as a part of question. The majority of (34.6%) users in 9 university libraries of Uttar Pradesh covered in this study used their libraries for Issue / Return of books followed by 149 (25.8%) for Scanning Latest Journals and Newspapers for keeping up to date information. The data only 46(7.9%) users have used the library for specific information of their information. The data collected from this question has been analyzed in Table No.12.

Table No. 12

TABLE SHOWING USE OF LIBRARY 'PURPOSE-WISE'

S.No.	Purpose of Visiting Library	Nos. of Users	% of Nos. of Users
1.	Current Aware Service	50	8.6%
2.	Specific Information	46	7.9%
3.	Study/Consultation	67	11.6%
4	Photocopying	25	4.3%
5.	To Meet Friends	40	6.9%
6.	Scanning Latest Journals / Newspapers	149	25.8%
7.	Issue / Return of Books	200	34.6%
Nos. of Users Survey = 577			

6.12 Services Offered by Libraries

The services offered in the libraries are presented in table -12. All the 9 university libraries offer reference services and book issues to the library users for home. Most of university libraries do not have Internet Access and CD-ROM facilities. All the 9 university libraries compile bibliographies for their users. Data reveals that no university library offer SDI services to their users. The information of services offered by the libraries has been analyzed and tabulated in below mentioned table.

Table No. 13

TABLE SHOWING SERVICES OFFERED BY LIBRARIES

S.No	Library Service	RML	LU	GU	MG KV	SSS	SS M	DR.B RA	CCU	BU
1.	Inter-Net-Access Services	NO	YES	NO	NO	NO	NO	YES	NO	NO
2.	Compilation of Bibliographies	YES	YES	YES	YES	YES	YES	YES	YES	YES
3.	Current Awareness Services	NO	YES	NO	NO	NO	NO	YES	NO	NO
4.	On-Line- Literature Search	NO	YES	NO	NO	NO	NO	YES	NO	NO
5.	Newspaper Clipping Services	NO	YES	NO	NO	NO	NO	NO	NO	NO
6.	Selective	NO	NO	NO	NO	NO	NO	NO	NO	NO

	Dissemination of Information									
7.	Indexing Services	NO	NO	NO	NO	NO	NO	NO	NO	NO
8.	Abstracting Services	NO	NO	NO	NO	NO	NO	NO	NO	NO
9.	Translation Services	NO	NO	NO	NO	NO	NO	NO	NO	NO
10.	Reference Services	YES	YES	YES	YES	YES	YES	YES	YES	YES
11.	Inter-Library-Loan Services	YES	YES	YES	YES	YES	YES	YES	YES	YES
12.	CD-ROM Search	NO	YES	NO	NO	NO	NO	NO	NO	NO
13.	Orientation Service i.e. Training Course on use of Information Technology	NO	YES	NO	NO	NO	NO	NO	NO	NO
14.	Reprography Services (i.e. Photocopy).	NO	YES	NO	NO	NO	NO	NO	YES	YES
15.	List of Current Research Project	NO	NO	NO	NO	NO	NO	NO	NO	NO
16.	Repackaging of information	NO	NO	NO	NO	NO	NO	NO	NO	NO
17.	Patents Information Services	NO	YES	NO	NO	NO	NO	NO	YES	NO
18.	Notification about	NO	NO	NO	NO	NO	NO	NO	NO	NO

	Conferences/Seminar/Workshops									
19.	Standards Information Services	NO	YES	NO	NO	NO	NO	NO	YES	NO

6.13 Use of Information Technology

The use of Information Technology in university libraries has been focused in order to meet the ever-growing diversified information needs of consumers. The university libraries and information centers are to be automated in order to maximize user satisfaction. In Uttar Pradesh, the trend in use of Information Technology in libraries in general and university libraries in particular was very slow and not gaining fast momentum as in other central university libraries and academic institutions.

In this context it is to be recognized that the attitude of library staff are to be studied and assessed before the introduction of Information Technology in university libraries of Uttar Pradesh. Further the technological changes in library and information services are to be approached from attitudinal or psychological pursuit of view of library staff and library users.

6.13.1 Staff Point of View

The staff attitude is an important factor in planning of library automation. Therefore, this study aims to gauge the degree of perception of library staff in libraries toward the application of information technology. The information collected through questionnaire survey of library staff has been analyzed in Table No.14

Table No.14

TABLE SHOWING USE OF INFORMATION TECHNOLOGY IN LIBRARIES

STAFF PERSPECTIVES.

S.No.	Attitude of Library Professional Toward I.T.	Agree %	Disagree %
1.	Improves Quality of LIS	140 (93.3%)	10 (6.3%)
2.	Improves Efficiency of Library	139 (92.6%)	11 (7.3)
3.	Enhance knowledge and expertise	142 (94.6%)	08 (5.3)
4.	Makes Integration within the Library	120 (80.0%)	30 (20.0%)
5	Essential to Improve the Communication	141 (94.0%)	09 (6.0%)
6.	Helpful to obtain right information at right time and the right place	145 (96.6%)	05 (3.4%)
7	Improves the Status of Library	139 (92.6%)	11 (7.3%)
8.	Disturb the Routine Work of the Library	13 (8.7%)	137 (91.3)
9.	Reduces the Work Load of Library Staff	130 (86.6%)	20 (13.3%)
10.	Takes Over the Traditional Way of Working	40 (26.6 %)	110 (73.3%)
11.	Spoil the Library's Image	52 (34.6%)	98 (65.3%)

A questionnaire has been designed to elicit the library professional's opinions working in the 9 University Libraries in Uttar Pradesh. A total of 150 samples have been collected. The data have been analyzed qualitatively and quantitatively to draw the inferences in this study.

Table No.14 presents the attitude of library professional towards application of Information Technology. A total of 11 variables have been identified and respondents asked to give their opinion. It is seen after analysis of data that variable 1,2,3,5,6 &7 have been endorsed positively by 93.3%, 92.6%, 94.7%, 96.6% & 92.7% respondents. Whereas variable 8, 10 &11 have been endorsed by less than 40.0% of respondents (8.7%, 26.6% & 34.6%). 'Information Technology uses often disturb the routine of the library is accepted by merely 8.7% library professionals.

6.14 Availability of I.T./Computer

With a view to know what types of information technology and computer facilities are available in university libraries and how many 'users' of these university libraries are 'effected' with the use of latest Information Technology. The information of availability of I.T./Computer facilities made the part of questions. The data has been analyzed in Table No.15

Table No.15

TABLE SHOWING AVAILABILITY OF I.T./COMPUTER IN LIBRARIES

S.N o	I.T./Computer Facilities	RML	LU	GU	MG KV	SSS	SSM	Dr.B RA	CCU	BU
1	Inter-Net	NO	YES	NO	NO	NO	NO	YES	NO	NO
2	CD-ROM	NO	YES	NO	NO	NO	NO	NO	NO	NO
4	Reprography Services	NO	YES	NO	NO	NO	NO	NO	YES	NO
5.	Micro-films	NO	YES	NO	NO	NO	NO	YES	NO	NO
6.	Micro-fiches	NO	YES	NO	NO	NO	NO	NO	NO	NO
7.	Over-head Projector	NO	NO	NO	NO	NO	NO	NO	NO	NO
8.	LAN	NO	YES	NO	NO	NO	NO	YES	NO	NO
9.	Computerized Database	NO	YES	NO	NO	NO	NO	NO	NO	NO
10.	bar-code	NO	NO	NO	NO	NO	NO	NO	NO	NO
11.	Fax	NO	YES	NO	NO	NO	NO	NO	NO	NO
12	Telephone	YES	YES	YES	YES	YES	YES	YES	YES	YES

6.15 Reasons for Failure of I.T.

To know the reasons responsible for failure to introduced new information technology in university library 11 questions were formulated to seek library user opinion. The data analyzed has been tabulated in Table 16.

Table No.16**TABLE SHOWING REASONS FOR FAILURE OF I.T. IN UNIVERSITY LIBRARIES**

S.No	Reasons for Failure of I.T.	Agree %	Disagree %
1.	Lack of Library Grant	142 (94.6%)	08 (5.3)
2.	Lack of adequate provision of recurring funds	139 (92.6%)	11 (7.3)
3.	Lack of interest in Library Professional	140 (93.3%)	10 (6.3%)
4.	Lack of adequate trained Library Professional	145 (96.6%)	05 (3.4%)
5	Lack of Coordination among library professional	141 (94.0%)	09 (6.0%)
6.	Lack of support from university authority	120 (80.0%)	30 (20.0%)
7	Lack of initiative by library professional	139 (92.6%)	11 (7.3%)
8.	Lack of interest on the part of library users	13 (8.7%)	137 (91.3)
9.	Lack of scope for library professional	130 (86.6%)	20 (13.3%)
10.	Lack of capability of library professional to learn new information technology	110 (73.3%)	40 (26.6 %)
11.	Fear of Modern Information Technology	145 (96.6%)	05 (3.4%)

A questionnaire has been designed to elicit the library professional's opinions working in the Nine University Libraries in Uttar Pradesh. A total of **150** samples have been collected. The data have been analyzed qualitatively and quantitatively to draw the inferences presented in this study.

A total of 12 variables presented in the Table No.16 explain the reasons for failure of information technology in university libraries. **'Lack of adequate trained Library Professional in the Area of Information Technology'** 96.6% (Variable No. 4) is the biggest reason responsible for failure of application of Information Technology in university libraries, **'Lack of Library Grant'** (Variable No.1) and **'Lack of Initiative on the Part of Library Professional'** (Variable No.6) has been rated by 142 (94.6%), and 141 (94.0%) library professional surveys respectively. It is followed by the **'Lack of Support by the University Authorities'** 120 (80.0%) (Variable No. 12). About 73.3% of the respondents have expressed that the lack of professional recognition by the authorities (Variable No.11) and lack of adequate provision for recurring costs 92.6% (Variable No.2) are the common reasons for failure of application of information technology in university libraries in Uttar Pradesh.

6.16 Information Technology

6.16.1 Users Point of View

The 'Users Attitude' is an important factor in planning of library automation. Therefore, this study aims to gauge the degree of perception of library users in libraries toward the application of information

technology. The information collected through questionnaire survey of library staff has been analyzed in Table No.17.

Table No.17

TABLE SHOWING USE OF INFORMATION TECHNOLOGY:

USERS POINT OF VIEW.

S.No.	Attitude of Users for I.T.	Agree %	Disagree %
1.	Need to Improves LIS	547 (94.8%)	30 (5.1%)
2.	Need to Improves Efficiency of Library	549 (95.1%)	11 (4.8%)
3.	Enhance knowledge and expertise	542 (94.6%)	08 (5.3%)
4.	Need to Integrate the Library Activity	550 (95.3%)	27 (4.6%)
5.	Need to Improve Communication Channel	541 (93.7%)	36 (6.2%)
6.	Provides Right Information at Right Time and the Right Place	545 (96.6%)	32 (5.5%)
7.	Full fills Users Needs	542 (93.9%)	35 (6.0%)
8.	Should Introduce in University Libraries	568 (98.4%)	09 (1.6%)
9.	Save the Time of User	550 (95.3%)	27 (4.6%)
10.	Difficult to handle	80 (13.8 %)	497 (86.1%)
11.	Enhance the Library's Image	543 (94.1%)	34 (5.8%)

A questionnaire has been designed to elicit the 'Library Users' opinions of Nine University Libraries in Uttar Pradesh. A total of 577 samples

have been collected. The data have been analyzed qualitatively and quantitatively to draw the inferences presented in this study. Table No.17 presents the attitude of 'Library Users' towards Use of Information Technology. A total of 11 variables have been identified and respondents asked to give their opinion. It is seen after analysis of data that all the variable (except variable No. 10) have been endorsed positively by more than 90.0% of the respondents. Whereas variable 10 have been endorsed by merely 80 (13.8%) i.e. 'Difficult to handle the Information Technology' while 497 (86.1%) against it.

6.17 Users Awareness Methodology

User awareness of up-to-date information to clarify the preferred ways for users keep them abreast about latest arrival and news. 10 categories were identified and formulated as question. More than 90% out of 577 users in 9 university libraries adopted four variables 2,3,8, &11 i.e. (Library Catalogue 98.4%, Book-Display/Posters 94.6%, and Reference Queries 93.7% & Personal Contact 95.3%).

Table No.18

TABLE SHOWING USERS AWARENESS METHODOLOGY IN THE LIBRARIES

S.No	Users Awareness Methods	Nos. of Users	%Nos. of Users
1.	Bibliographies	080	13.8 %
2.	Library Catalogue	568	98.4%
3.	Book-Display / Posters	542	94.6%
4.	CAS Bulletins	035	06.0%
5	SDI	008	05.3%
6.	Seminar/Conferences	034	05.8%
7	Announcement	036	06.2%
8.	Reference Quarries	541	93.7%
9.	Exhibitions	027	04.6%
10.	Accession List	189	32.7 %
11.	Personal Contact/Talks	550	95.3%
12.	Orientation Programme	035	06.0%

6.18 Observations

- Majority of users **359 (62.2%)** of the respondents were in the age group of less than 30 years
- **13.8%** users were more than 40 years

- Of 577 users surveys the analysis of data reveals that majority of library users gives their opinion were from **238 (41.2%)** Social Science followed by **180 (31.1%)** Natural Science.
- Whereas least number of opinion were received from **159 (27.5%)** Humanities.
- The maximum numbers of **238 (41.2%)** out of 577 users in UP covered by this study are social science.
- The analysis of data reveals that survey covers **44.7%** out of 577 users were under-graduates followed by **24.0%** Postgraduate.
- While research scholar were **31.1%** (each from M.Phil and Ph.D.)
- Majority of library users are male **391 (67.7%)**
- The Female constitute **186 (32.3%)** part of the survey while **67.7%** were males
- Male female ratio is **2.1**
- Majority **391 (67.7%)** of 'users' belongs to category 'students'
- Survey includes **5.1%** opinions from faculty members and **5.1%** administrative staff of the university and rests are from 'Others' categories and research scholar
- RML University Library has 441558 books and 24 current periodicals in its stock.
- University of Lucknow library has large collections with Micro-films and Photostats facilities. The Library is provided with

computer facilities and computerized databases for the library are being under process.

- University Library called 'Tagore Library' (Central Research Library) is one of the biggest libraries of Northern India a part of INSDOC (CSIR) Network named as SIRNET NETOWRK, (1992-93). The University Library has 508000 books and 500 current periodicals.
- Dr.B.R. Ambedkar University Library at Agra 1,90169 books in its stocks and 318 journals were under subscriptions. (Including 215 periodicals from different countries in exchange for the 'University Journal of Research.)
- The MGKV Library called 'Shri Bhagwandas Central Library' has 1,95,781 books in its collection and 675 periodicals on subscription.
- The Gorakhpur University Library has 274347 books and 713 current periodicals and 691 bound periodicals while the library maintained no manuscripts.
- SSV Library has collection 1,81704 books and 62 Periodicals in its stock.
- CCSU Library has a collection 89917 books and 342 Periodicals and the library also has 17 micro-films in its stock
- BU Library has 14109 books and 131 current periodicals

- SSS University Library has 181704 books 72 current periodicals while 365 manuscripts
- Budget position of Bundelkhand University, Jhansi is very weak.
- In comparision to university budget (Rs.400 Lakhs) just 1.15 Lakhs given to library which is even below one percent i.e. 0.02%.
- Lucknow University also has weak financial back-up, the university budget for year 1997-98 was Rs.1016.62 Lakhs
- The LU Library budget was just 12 Lakhs which 1.1%.
- Problem of all nine state university libraries in Uttar Pradesh is that of scarcity of funds.
- State University Libraries have been running on considerable deficits for the last several years.
- This uneven and under-funding is far below the standard funding norms for university library recommended by various bodies in our country.
- Majority of 297 (51.4%) are agreeing that they not aware about the library collection and services provided by the library while 280 (48.5%) are not agree with this view.
- Majority of 338 (58.6%) are agree that there are lack of developed library and information science services/product provided by the library while 239 (41.4%) are not agree with this view.

- Majority of **378 (65.6%)** are agree that there are lack of availability of Current Awareness Service in the library while **199 (34.4%)** are not agree with this view.
- Majority of **427 (74.1%)** are agree that there are lack of availability of Information Technology in the library while **150 (25.9%)** are not agree with this view.
- Majority of **527 (91.4%)** users said they have enough time to visit the library while **50 (08.6%)** said they have less time to visit the university Liberia hence not agree with this view
- Majority of library users feels **319 (55.2%)** that that library staff are not cooperative while **258 (44.7%)** are not agree with this view.
- Of 577 library users **130 (22.5%)** are highly satisfactory with the library services and facilities.
- Of 577 library users **208 (36.0%)** are satisfactory with the library services and facilities
- Of 577 library users **120 (20.7%)** are not satisfactory with the library services and facilities
- Of 577 library users surveys **92 (15.9%)** rated the library services and facilities average.
- Of 577 library users surveys **27 (4.6%)** rated the library services and facilities below average.

- Majority of **199 (34.4%)** users out of 577 in U.P. covered in this study were using their libraries four times a week, followed by 150 (25.9%) five times a week.
- Where as **50 (8.6%)** using the library each 'daily' and 'once a week.'
- Majority of **200 (34.6%)** out of 577 users in 9 university libraries of Uttar Pradesh covered in this study uses their libraries only for Issue / Return of books.
- **149 (25.8%)** out of 577 users in 9 university libraries of Uttar Pradesh covered in this study uses their libraries only Scanning Latest Journals and Newspapers for keeping them up to date, while 46 (7.9%) uses for specific information
- Data analysis of 577 users reveals **142 (94.6)** that there is lack of library grant which leads to failure of information technology in the library just **8 (5.3%)** oppose the views
- Data analysis of 577 users reveals **139 (92.6%)** that there is Lack of adequate provision of recurring funds which leads to failure of information technology in the library just **11 (7.3%)** oppose the views
- Data analysis of 577 users reveals **140 (93.3%)** that there is Lack of interest in Library Professional which leads to failure of information technology in the library just **10 (6.3%)** oppose the

views

- Data analysis of 577 users reveals 145 (96.6%) that there is Lack of adequate trained Library Professional which leads to failure of information technology in the library just 05 (3.4%) oppose the views
- Data analysis of 577 users reveals 141 (94.0%) that there is Lack of Coordination among library professional which leads to failure of information technology in the library and just 09 (6.0%) oppose the views
- Data analysis of 577 users reveals 120 (80.0%) that there is Lack of support from university authority which leads to failure of information technology in the library and just 30 (20.0%) oppose the views
- Data analysis of 577 users reveals 139 (92.6%) that there is Lack of interest on the part of library users which leads to failure of information technology in the library and just 137 (91.3%) oppose the views
- Data analysis of 577 users reveals 130 (86.6%) that there is Lack of scope for library professional which leads to failure of information technology in the library and just 20 (13.3%) oppose the views
- Data analysis of 577 users reveals 110 (73.3%) that there is Lack

of capability of library professional to learn new information technology which leads to failure of information technology in the library and just 40 (26.6 %) oppose the views

- Data analysis of 577 users reveals 145 (96.6%) that there is Fear of Modern Information Technology which leads to failure of information technology in the library and just 05 (3.4%) oppose the views
- Data analysis of 577 users reveals 120 (80.0%) that there is Lack of support from university authority which leads to failure of information technology in the library and just 30 (20.0%) oppose the views.

Chapter : Seven

***Observations
and
Discussions***

OBSERVATIONS & DISCUSSIONS

In order to test the above hypothesis the observations from the analytical study of the data has been discussed in this chapter in the light of the relevant theoretical models, the researches, and the hypotheses proposed in the present study. The finding reveals that the most of the hypothesis of the present study have happen as well as found not to be defended. The hypotheses are:

HYPOTHESIS-1: Effect on Users Area of Interest

The analysis of the from different university library and date obtained during suney is shoren in table 2. It is observations from table 2 that the users in Social Sciences are mostly aware about the resources and facilities available in university library, where as the users in Humanities and Natural Science are to be comparatively less. The use of resources like book and journals is higher by social science in comparison to others. The lower percentage observation in others subjects are required to be strengthened. Of 577 users surveys the analysis of data reveals that majority of library users gave their opinion were 238 (41.2%) from Social Science followed by 180 (31.1%) from Natural Science. Whereas least number of opinion were received from 159 (27.5%) from Humanities. The dualysis of is the renpect to the users area of specialization.

Is shown in table3.

HYPOTHESIS-2 : Effect of Retrieval and Storage System

It has been found from the analysis of data in table-----that user perception about the new addition is poor. Most of the library user depends on the catalogue only. Due to the neglect of use of information technology and computer the information retrieval system found less very effective in the libraries.

HYPOTHESIS-3: Effects of Nature of Collection

It has been observed that the majority of student (both UG & PG) often used the literature acquired by the library and the others categories are hardly visiting and consulting the libraries. It is found that books formally acquired by the libraries are not meeting the needs and purpose of these categories. The investigator found on the basis of analysis of data that books and journals are not acquired in sufficient numbers and acquiring the most of reading materials of text -book nature. The nature of library collection is not meeting the interest of teachers and researchers. Therefore, these categories are abstained to visit the library. Table----

shows the current position of state university libraries. The RML has 441558 books and 24 current periodicals in its stock. LU library has large collections with Micro-films and Photostats facilities with 5,08,000 books and 500 current periodicals. Dr.B.R. Ambedkar University Library at Agra has 1,90169 books in its stocks and 318 journals were under subscriptions. The MGKV Library has 1,95,781 books in its collection and 675 periodicals on subscription. The GU Library has 274347 books and 713 current periodicals and 691 bound periodicals while the library maintained no manuscripts. SSV Library has collection 1,81704 books and 62 Periodicals in its stock. CCSU Library has collection 89917 books and 342 Periodicals and the library also has 17 micro-films in its stock. BU Library has 14109 books and 131 current periodicals. SSS University Library has 181704 books 72 current periodicals while 365 manuscripts

HYPOTHESIS-4 : *Effect on Length of Use of Library*

Services

The investigator conducted a survey and attempted to find out the length of the use of the library. It has been found during analysis of data that users have no definite length or period to use the library. The scale for measuring the use of library is varies from library to library. But the less use of library reveals that these libraries do not provide the quality services

and quality collection. It is seen on the basis of the analysis of the data that the libraries are being visited and consulted by the students only for the use of the prescribed books referred by their respective teachers. This is only because these universities have no worth addition or collection to their libraries. The purchase of new books was not possible due to acute shortage of funds. Most of the university libraries are surviving only on 1% or meager budget of the total university library budget. Hence it has made poor collection and services. The large majority 391 (67.7%) of 'users' belongs to regular students of the university. The survey includes 5.1% opinions from faculty members. This covers 8.6% researcher and only 5.1% administrative staff of the university and rests are from 'Others' categories.

HYPOTHESIS-6 : Effect Due to Shortage of Fund

It is seen on the basis of analysis of data that the acquisition of literature is found not satisfactory in most of libraries. This shows that funds position of these libraries is not sound for books and journals. The funds, which they are getting, can be with for textbooks only. In some university libraries, the funds position is found a little bit satisfactory.

HYPOTHESIS-7 : *Effect Due to Staff Attitude & Working Culture*

It is also evident on the basis of analysis of data that the frequency of use of libraries is not satisfactory. There is no constant position of the use. It shows that facilities extended by these libraries are not satisfactory. The books and journals are not displayed in time. The books are not processed properly. Whatever the journals are not displayed in time. The books are not processed properly. Whatever the journals subscribed by the libraries are not accessible and the same position is found for the books. The staff is also not taking interest in making these literature accessible to readers. The frequency of the use of the literature can be improved if the required funds and services are made available to readers.

HYPOTHESIS-8 : *Effect Due to Budget Cut & Cost Inflation*

It has been found that though the collection of books in most of university libraries is baguette qualitatevely Even the bound periodicals are in good number. But the table shows that the standard of books and the journals are not meeting the needs and purpose of the users. This is happened only because to the allocation of funds for books and journals has drastically

reduced. Therolry few libraries are subscribing good journals in some subjects. The position in social services is somewhat satisfactory. But the position of natural sciences and humanities are very poor. Most of the books and journals in natural sciences and Humanities are costly and they are mostly foreign journals and books as well. Since the funds for books and journals are not adequate Therefore, the university libraries are unable to make good collection or to meet the needs of their users. It is said that the university libraries are the nerves of any institutions. In other words the good collection of books and journals of any library reflect the good institutions. Further the teaching can be sound only when the libraries meet the needs of their clientele.

HYPOTHESIS-9: *Effect Due to Increase in* ***Membership***

The number of membership of these libraries has been increased where as the position of the funds have not been increased so far. Incidentally, it has been decreased and therefore the use of the libraries and their collection are found not up to the mark. Finally, the clientele will respond to use the collection if it is made accessible and also a good number of literature is acquired .

HYPOTHESIS-10: *Effect on Quality of Library & Information Services*

The Investigator found after data analysis of 150 library staff from 9 university libraries 140 (93.3%) support the part of hypothesis and indicates that *USE OF INFORMATION TECHNOLOGY IMPROVES QUALITY OF LIS* whereas 10 (6.3%) not supported the part of hypothesis.

HYPOTHESIS-11: *Effect on Efficiency of Library & Information Services*

The Investigator 150 library staff from 9 university libraries, 139 (92.6%) supported the part of hypothesis and indicates that *USE OF INFORMATION TECHNOLOGY IMPROVES THE EFFICIENCY OF LIS* whereas 08 (5.3%) not supported the part of hypothesis.

HYPOTHESIS-12: *Effect on the Knowledge and Expertise of Library Users*

The Investigator has seen that-142(a 94.6%) library staff from 9 university libraries supported the part of hypothesis and indicates that *USE OF INFORMATION TECHNOLOGY ENHANCE THE KNOWLODEGE AND EXPERTISE OF USERS* whereas 08 (5.3%) not supported the part of hypothesis.

HYPOTHESIS-13: *Effect on Integration Within the Library*

The data analysis of 150 library staff from 9 university libraries reveals that 120 (80.0%) supported the part of hypothesis and indicates that *USE OF INFORMATION TECHNOLOGY MAKES INTEGRATION WITHIN THE LIBRARY* whereas 30 (20.0%) not supported the part of hypothesis.

HYPOTHESIS-14: *Effect on Communication Channel*

The Investigator found after data analysis of 150 library staff from 9 university libraries reveals that 141 (94.0%) supported the part of hypothesis and indicates that *INFORMATION TECHNOLOGY IS ESSENTIAL TO IMPROVE COMMUNICATION CHANNEL* in the library whereas 09 (6.0%) not supported the part of hypothesis.

HYPOTHESIS-15: *Effect on Obtaining Right Information at Right Times at the Right Place*

The Investigator found after data analysis of 150 library staff from 9 university libraries 145 (96.6%) supported the part of hypothesis and indicates that *INFORMATION TECHNOLOGY IS HELPAHUL HELP FULL TO OBTAIN RIGHT INFORMATION AT RIGHT TIME AT THE RIGHT PLACE* whereas 05 (3.4%) not supported the part of hypothesis.

HYPOTHESIS-16: *Effect on Status of University Library*

The Investigator also found after data analysis of 150 library staff from 9 university libraries 139 (92.6%) supported the part of hypothesis and indicates that *INFORMATION TECHNOLOGY IMPROVES THE STATUS OF LIBRARY* whereas 11 (7.3%) not supported the part of hypothesis.

HYPOTHESIS-17: *Whether Disturb the Routine Work of the Library*

Only 13(8.7%) library staff out of one of the opinion that 150 library staff from 9 university libraries *INFORMATION TECHNOLOGY DISTURB THE ROUTINE WORK OF LIBRARY* whereas 137 (91.3%) do not support that part of hypothesis.

HYPOTHESIS-18: *Whether Reduce the Workload of the Library Staff*

The Investigator found 56 that 130 (86.6%) library staff indicates that *INFORMATION TECHNOLOGY REDUCE THE WORKLOAD OF LIBRARY STAFF* whereas 20 (13.3%) library staff not support the part of hypothesis the above .

HYPOTHESIS-19: *Whether Takes Over the Traditional Way of Workings*

The Investigator found after data analysis of 150 library staff from 9 university libraries 40 (26.6%) supported the part of hypothesis and indicates that *INFORMATION TECHNOLOGY TAKES OVER THE TRADITIONAL WAY OF WORKINGS* whereas 110 (73.3%) not support the part of hypothesis.

HYPOTHESIS-20: *Whether Spoil the Image of Library*

The Investigator found after data analysis of 150 library staff from 9 university libraries 52 (234.6%) supported the part of hypothesis and indicates that *INFORMATION TECHNOLOGY SPOIL THE IMAGE OF LIBRARY* whereas 98 (65.3%) not supported the part of hypothesis.

Summary and Conclusion

The present study has revealed the various facts. In addition to it, the study also reveals the exact level of the collections for books and journals in these libraries. The study also reveals that library users are very much affected with the induction of new information technology. The users are hopeful to get these services in their libraries for the better utilization of library resources and for prompt retrieval of information.

In other words, how much university authorities take care of the required funds for books and journals induction of new information technology for its library There should be separate budget earmark for the acquisition of

various modes of new information technologies such as computer, Inter-Net, CD-ROM, and Local Area Network. Etc.

Meanwhile, the staff of the libraries can also play an important role for creating and developing a learning culture, which is very much essential for the success of the university library.

The result of the present study clearly indicates that the use of library can be increased if proper allocation of funds and collection policies are followed in the libraries. The study also reveals that the information technology development in these libraries has been the most neglected aspect. The university library in general does not provide sufficient opportunity to its clientele for maximum exploitation of the literature. Thus, the use of the library can be increased with how best the librarian take care of the development of collection. The essential requirement is for optimum utilization of library sciences commitment to the institutions. The library staff and university authorities ensure the personal and collection renewal, which is an other most important and effective means of managing change successfully. It is important on the part of authorities to allocate adequate funds for books and journals for good a quantitative collection and for library staff in service training and education facilities

and similar other skills to make provided the literature effectively. This is possible only when the libraries are augmented with more funds. financial resources

It is suggested that the library managers should review the status of the use of literature time to time. They must subscribe the standard journals in Humanities and natural sciences and also acquire the books in the same subjects.

It is suggested that books including library catalogue, which is displayed in the library for the users, should be maintained effectively. This will help to the readers to know what are literature are incoming and added. Display in the library and the list of addition is the most effective tool is being followed in every university libraries. The clientele will be induced through this tool to make use maximum of the library.

It is suggested that the library should acquire the standard books and journals. It has found that students are generally used the library where as teachers and researchers use less often. Once the library acquire the relevant journals and books acquire and the same to be displayed. So that they should know what are added.

Because of poor collection it has effected the use of collections of the library. It is suggested that the libraries should maintain the statistics strictly so that they could review the position. It is required to pay much attention on the good books and journals i.e. relevant to their subjects. It will help a lot to the teaching faculty as well as researcher also. The collection found poor in most of university libraries. It is only because there is no sufficient funds available to the libraries. It is suggested that the libraries should be given sufficient funds for books and journals. The funds should be raised every year in the light of strength of the membership as well as increasing cost of books and journals. Once the collection satisfactory the users may make optimum use of library services

Information technology has been playing an important role in the functioning of the libraries. The present study suggested that the libraries must introduce the computer applications in their libraries. The literature should be displayed in the computer. The readers may use make of library without only difficulty in shortest possible time. Therefore the computer is very much essential tool for a library today.

Chapter : Eight

Recommendations and Conclusions

RECOMMENDATION & CONCLUSIONS

Based on review in iterative and analysis I data collected during the present study related search through the related studies available and within the reach of the researcher, and after analyzing the data collected through two field surveys conducted during the course of research study, certain presentable inferences and conclusion, have been drawn, and aueding certain recommendations have been formulated with the purpose of benefiting the university libraries in general and state university libraries of Uttar Pradesh in particular. In present study ,A survey of nine State University Libraries of Uttar Pradesh was undertaken to study the impact of Information Technology on university libraries and consumers effectivity. Which reveals that the malfunctioning of university libraries in Uttar Predesh is due to a variety of common reasons as stated below:

General Conclussions

1. The university libraries in Uttar Pradesh are having inadequate infrastructure and as a result their growth have been retarded.
2. The concept of information technology present seinaiio at somewhat new to the university libraries of Uttar Pradesh. in modern sense is appears to be new to the consumers as well as staff to administration of the University libraries.

3. Most of university libraries do not earmark separate budget to computerized library services and purchase for new information technology.
4. The physical facilities at university libraries needs to be adequate to meet its consumer needs. It observed that university libraries are lacking in physical facilities and proper attention of the university authorities to realize the importance of libraries in the universities.
5. Almost all the university libraries are deficient in trained staff to fulfill the uses requirement. Hence it is proposed that the situation is allowed to continue for a long time adequate provision of professional staff should be made to can bring a significant change in developing bringing effective library services.
6. It is observed that non-professionals manage most of the libraries, there is technical collapse prevailing in the libraries. As a result the essential documentation and information services as expected from a university library are not offered by these libraries. There prevail no inter-personal relations among the staff. There is lack of motivation and creativity among the staff of the libraries.
7. The Universities have failed to appoint competent librarians in most cases; as a result there is lack of leadership to further the activities of the libraries.

8. The library resources in almost all the libraries are underutilized due to adequate physical facilities, user awareness due back qualified trained library professional..
9. The maintenance of the statistical records pertaining to their activities and services in most of the libraries is poor however They somehow manage to supply the statistical data required for their annual reports of the universities.
10. There is no administrative machinery to evaluate the performance on the libraries. The Library Committee, which rarely meets in a year mostly, finalizes the budget of the library.
11. The Study further reveals the inactiveness of the users for their right to use library materials.
12. Because of the inadequate infrastructure and poor services offered, the university community does not recognize the importance of libraries.
13. There is lack of library-centered teaching in the universities as the teachers in classroom teaching do not offer Adequate and up-to-date references. Further of lack of documentation activities, announcement mechanisms and other modern library services expected to attract the library users are absent.

14. Rising cost of reading materials and inadequate budget provisions have directly to affected the growth of the libraries. The continuance of the periodicals subscription has become almost impossible because of the unusual rising cost and inadequate grants provided by the state government. UGC grants are poor to the state universities, which continue for irregular plan periods.
15. There is lack of consumer and appropriate technology in the university libraries. This would have been possible, had there been adequate and competent professional staff appointed in the libraries. This requires the urge and creativity on the part of the staff as well as dynamic leadership on the part of the university librarian.
16. The library staffs are ignorant of the modern on-line information services offered by national and international agencies. They also lack the knowledge of liaison and support services available in India. Hence the referral activities as required for the users community are totally absent.
17. There is no initiative extended by the university libraries to attract the users towards their services. The newly admitted users are looked upon as burden rather than the real clients of the library system.

18. The University librarians mostly engaged in the in-house supervisory activity function as bureaucrats rather than employing management techniques in the libraries to bring innovation in their services. There is lack of trained techniques in the libraries.
19. There exist is no collection development policy in the university libraries, which cause frustration among users. The stock-verification / rectification and identification of active collection are hardly carried out in any library. The users' suggestions are hardly taken up in selecting the reading materials.
20. The indifferent attitude of university authorities to develop the services of the university libraries. The university librarians play the role of 'middleman' to convince the university administration to pay attention towards the basic problems of the libraries. The senior academicians involved in the university administration hardly think of the development of the university libraries which is really the 'hub's all intellectual activities of the universities.
21. Nevertheless, there is a need for an overall increase in the level of use of information technology and the university librarians are agreed that they should employ more and better techniques & services.

22. Current Awareness Bulletin need to be made more comprehensive and regular
23. Selective Dissemination of Information needs to be established according to the 'consumers' interest profiles.
24. Special bibliographies need to be compiled and up-dated regularly on various topics to meet the consumers needs
25. Newsletters, new acquisitions lists, new published titles, forthcoming events and conferences, lists of translated materials can all be compiled and used to inform users about new and update information needed by them.
26. Formal channel in university library to be adopted to complement the informal communication and support it.

Suggestions & Recommendations

For achieving optimum performance in the university library work the following measures would be highly effective especially in State University Libraries in Uttar Pradesh.

Recommendations -1

The essential infrastructures like adequate accommodation, staffing pattern and budgetary provision have to be provided.

Recommendations -2

University libraries should design their services putting high priority on the needs of the consumers.

Recommendations -3

The university librarians need to accept and adopt the total management approach to the provision for information services and techniques

Recommendations - 4

The LIS Schools /universities in U.P. need to include information technology in their curriculum. This is because information technology is an important area of university library services.

Recommendations -5

The Uttar Pradesh University Libraries should consider a series of training of Postgraduate courses for the library science students and Indian Library Association should consider a series of training course for the university librarians and senior professional on use of information technology.

Recommendations -6

The university library may encourage and support conference local seminar national workshops about information technology and services

Recommendations -7

The librarian and information professionals by way of their training and approach need to have the necessary prerequisites to become successful information technology handlers.

Recommendations -8

University libraries as one of the first steps in any information technology activity need to review the objectives of their services to ensure that they promptly and effectively respond to the real needs of the actual potential consumers.

Recommendations -9

In the university libraries the technical activities like classification, cataloguing and book preparation etc. are only confined to organization of the book collection. Attention should be given more to devising the following information products / services for meeting readers services.

- a) Current Awareness Services
- b) Compiling and packaging of Information
- c) Application of traditional information sources and skills to satisfy information requirements;
- d) Referral services;
- e) Literature search service;
- f) d) Organization of non-book and fugitive materials and;
- g) Providing Readers advisory services and prescribing reading materials

Recommendations -10

University librarians and senior professionals are made aware of the need for updating their personal professional staff. The proper conditions for the professional development of the staff, and broadening the opportunities for their participation in events, such as courses, seminars, workshops, professional discussions and on-the-job-training.

Recommendations -11

There is strong need of 'National Task Force on Information Technology' for State University Libraries for coherently organizing and developing the exploration of this new discipline, consider a set of representative projects, identify important challenges, investigate possibilities of integration and unification, and recommend more in-depth involvement by the database community.

Since, the information marketing agencies have appeared and providing instantly the literature search and on-line information services, attracting the research workers. In such a situation the information specialist may be forced to market his services. University libraries may lose importance and the library is to be saved from under-utilization of reading materials.

In the event of information marketing agencies cropping up in the field, it is pertinent to change the total outlook of the university libraries. Moreover because of the impact of mass media the users' attendance is considerably reduced causing under-utilization of collection of libraries.

Because of the high cost of reading materials and maintenance of the university libraries, the role of library professionals in general, and the university librarian in particular, should undergo change with a business outlook for attracting the library users to exploit the library collection and thereby becoming successful library managers.

Appendices : One

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Appendices : Two

Questionners

**CONSUMER'S EFFECTIVITY IN
CHANGING INFORMATION TECHNOLOGICAL SCENARIO AT
THE LIBRARIES OF THE STATE UNIVERSITIES IN U.P.**

1. NAME AND YEAR OF ESTABLISHMENT OF UNIVERSITY
2. YEAR OF ESTABLISHMENT OF LIBRARY
3. AREA OF LIBRARY (Sq.Mts)
4. COST OF LIBRARY BUILDING
5. WORKING DAYS OF LIBRARY IN A YEAR
6. OPENING HOURS OF THE LIBRARY
 - 6.1 ON WEEK DAYS FROM-----am TO -----pm.
 - 6.2 ON HOLIDAYS FROM-----am TO-----pm.
 - 6.3 IN EXAM DAYS FROM-----am TO -----pm

7. MEMBERSHIP

- 7.1 TEACHERS
- 7.2 RESEARCHERS
- 7.3 P.G.STUDENTS
- 7.4 U.G.STUDENTS
- 7.5 OTHERS
- 7.6 TOTAL MEMBERSHIP

1993-94	1994-95	1995-96	1996-97	1997-98

8. COLLECTIONS

- 8.1 MANUSCRIPTS
- 8.2 BOUNDT
PERIODICALS
- 8.3 CURRENT
PERIODICALS
- 8.4 BOOKS
- 8.5 REPORTS
- 8.6 MICROFORMS
- 8.7 COMPUTER
READABLE MATERIALS
- 8.8 OTHERS (PLEASE SPECIFY)
- 8.9 TOTAL COLLECTIONS

1993-94	1994-95	1995-96	1996-97	1997-98

9. TICK MARK THE RELEVANT

9.1 OPEN ACCESS

9.2 CLOSE ACCESS

9.3 PARTIALLY OPEN ACCESS

(IF YES, THEN TYPE OF DOCUMENTS FOR WHICH IT IS OPENES)

9.3.1 TEXT BOOKS

9.3.2 REFERENCE BOOKS

9.3.3 PERIODICALS

9.3.4 OTHERS(PLEASE SPECIFY)

10. SELECTION OF BOOKS FOR THE LIBRARY

10.1 LIBRARY STAFF-ASSTI LIBRARIAN/DY LIBRARIAN/TECHNICAL
STAFF

10.2 LIBRARIAN

10.3 TEACHERS

10.4 LIBRARIAN AND TEACHERS

10.5 USER'S PARTICIPATION

11. WHAT HAS BEEN THE TOTAL BUDGED OF THE UNIVERSITY DURING

1993-94

1994-95

1995-96

1996-97

1997-98

12. WHAT HAS BEEN THE TOTAL BUDGET OF LIBRARY DURING

1993-94

1994-95

1995-96

1996-97

1997-98

13. MUCH OF LIBRARY DUDGET HAS BUDGET HAS BEEN SPENT

1993-94 1994-95 1995-96 1996-97 1997,98

13.1 STAFF SALARY

13.2 READING MATERIALS

13.3 OTHHRS

14. HOW MUCH AMOUNT HAS BEEN PROVIDED FOR PURCHASING OF BOOKS PERIODICALS AND OTHER READING MATERIAL BY

1993-94 1994-95 1995-96 1996-97 1997,98

- 14.1 U.G.C.
- 14.2 STATE GOVT.
- 14.3 UNIVERSITY
- 14.4 OTHER IF ANY

15. PERSONS TRAINED IN COMPUTER APPLICATION

(IF POSSIBLE INDICATE THE COURSE THEY HAVE COMPLETED)

16. PLEASE TICK THE SERVICES/OPERATIONS FOR WHICH THE COMPUTER IS USED

- 16.1 ACQUISITION
- 16.2 CIRCULATIONG
- 16.3 INDEXING
- 16.4 ABSTRACTING
- 16.5 S.D.I
- 16.6 SEBJECT BIBLIOGRAPHY (ON DEMAND)

17. PLEASE NAME THE HARDWARE BEING USED IN LIBRARY

18. PLEASE NAME THE SOFTWARE BEING USEG USED IN LIBRARY

19 DO YOU HAVE THE FOLLOWING FACILITIEN IN LIBRARY

YES NO

- 19.1 FASCIMILE TRANSMISSON (FAX) SERVICES
- 19.2 TELEX
- 19.2 ELECTRONIC MAIL
- 19.3 TELECONFERENCING
- 19.4 VIDEO TEXT/TELETEXT

20 IF YOUR LIBRAY PARTICIPATE IN NETWORK PROGRAMME

PLEASE NAME THE NETWORK WITH WHICH YOUR LIBRARY IS
CONNECTED

**21 IF DOES THE LIBRARY MAINTAIN SEPARATE STATISTICS IN THE
FOLLOWING AREAS**

(IF YES, KINDLY MENTION)

1993-94 1994-95 1995-96 1996-97 1997,98

21.1 VISITORS

21.2 CIRCULATIONS(EXCEPT/ILL)

21.3 INTER LIBRARY LOAN

21.4 REPROGRAPHY

22. NUMBER OF DOCUMENTS TECHICALLY PROCURED DURING

1993-94

1994-95

1995-96

1996-97

1997-98

23 NUMBER OF PUBLICATION BROUGHT OUT BY THE LIBRARY DURING

1993-94

1994-95

1995-96

1996-97

1997-98

24 NUMBER OF SUBJECT BIBLIOGRAPHY PREPARED & SUPPLIED

1993-94

1994-95

1995-96

1996-97

1997-98

(SIGNATURE OF LIBRARIAN)

KINDLY MAIL THE FILLED QUESTIONNAIRE AT THE ADDRESS GIVEN BELOW:-

Mr.S.K. SHARMA,

127,NEW VIJYA NAGAR COLONY

AGRA-282004 (U.P.)

CONSUMER'S EFFECTIVITY
IN CHANGING INFORMATION TECHNOLOGICAL SCENRION
IN THE STATE UNIVERSITIES OF U.P.
(USER'S SURVEY)

1. NAME Prof./Dr/Mr./Mr.-----
2. PLEASE INDICATE YOUR GENDER MALE [] FEMALE []
3. STATUS
 - 3.1 RESRARCHER
 - 3.2 TEACH
 - 3.3 STUDENT
 - 3.4 ADMINSTRIVE SAFF
 - 3.5 OTHERS (PLEASE SPECIFY)
4. NAME OF THE DEPARTMENT & UNIVERSITY
5. FIELD OF SPECIALISATION
6. FOR OW LONG YOU HAVE BEEN USING THE UNIVERSITY LIBRARY
 - a. LESS THAN 6 MONTHS
 - b. 6MONTHS TO I YEAR
 - c. 1-2YEARS
 - d. 2-5YEARS
 - e. 5-10 YEARS
 - f. 10 YEARS & ABOVE
7. HOW OFTEN DO YOU VISIT THE LIBRARY
 - a. DAILY
 - b. TWICE A WEEK
 - c. ONE A WEEK
 - d. OCCASIONALLY
8. IF YOU ARE NOT A REGULAR USER OF THE LIBRARY, PLEASE INDICATE THE REASON
 - a. UNSUIT ABILITY OF IBRARY'S WORKING HOURS
 - b. LIBRARY DOES NOT OPEN NO HOLIDAYS
 - c. ORGANISATION (CLASSIFICATION,CATALOGING SHELL ARRANGEMENT IS NOT SATISFACTORY)
 - d. LIBRARY LACKS PROPER READING FACILITIES
 - e. LIBRARY STAFF IS NOT HELPFUL
 - f. ANY OTHERS PLEASE SPECIFY

9. HOW FAR THE LIBRARY'S COLLECTIONS MEET YOUR INFORMATION REQUIRE MENTS IN RESPECT OF YOUR AREA OF STUDY/RESEARCH.
 - 9.1 MOST ADEQUATELY.
 - 9.2 ADEQUATELY.
 - 9.3 SATISFACTORY.
 - 9.4 LESS SATISFACTORILY.
10. DO YOU REQUEST/RECOMMEND THE LIBRARY TO ACQUIRE PUBLICATIONS OF YOUR SPECIFIC INTEREST.
 - 10.1 YES
 - 10.2 NO
11. IF YES, THE RESPONSE OF THE LIBRARY HAS BEEN
 - 11.1 HIGHLY SATISFACTORY
 - 11.2 SATISFACTORY
 - 11.3 NOT SATISFACTORY
 - 11.4 POOR
12. HOW DO YOU COME TO KNOW ABOUT A NEW PUBLICATION ACQUIRED BY THE LIBRARY(KINDLY INDICATE THE ORDER IN WHICH YOU COME TO KNOW)
 - 12.1 DISPLAY IN THE LIBRARY
 - 12.2 DIST OF ADDITIONS
 - 12.3 LIBRARY CATALOGUE
 - 12.4 INFORALLY THROUGH OTHER STUDENTS/ RESERCHERS/ TEACHER
 - 12.5 INFORMALLY THROUGH THE LIBRARIAN/LIBRARIAN STAFF
 - 12.6 ANY OTHER SOURCE (PLEASE .SPECIFY)
13. FREQUENCY OF USE OF VARIOUS TYPE OF PUBLICATIONS/ COLLECTIONS BY YOU

	VERY OFTEN OFTEN OCCASIONALLY NEVER
13.1 MANUSCRIPT	
13.2 BOUND PERIODICALS	
13.3 CURRENT PERIODICALS	
13.4 BOOKS	
13.5 REPORTS/PATENTS/STANDARDS	
13.6 MICROFORMS	
13.7 COMPUTE READABLE MATERIALS	
13.8 ALL THE ABOVE INDIAN PUBLICATION	

- 13.9 ALL THE ABOVE FOREIGN PUBLICATION
14. FOR WHICH OF THE FOLLOWING PURPOSES YOU PRIMARILY USE THE LIBRARY
- 14.1 TEACHING
 - 14.2 RESEARCH
 - 14.3 SCHOLARLY WRITING
 - 14.4 SELF KNOWLEDGE
 - 14.5 PRESCRIBED COURSE
 - 14.6 CURRENT AWARE SERVICE
 - 14.7 SPECIFI INFORMATION
 - 14.8 STUDY/CONSULTAION
 - 14.9 PHOTOCOPYING
 - 14.10 TO MEET FRIENDS
 - 14.11 SCANNING LATEST JOURNALS/NEWSPAPERS
 - 14.12 ISSUE /RETURN OF BOOKS
15. PLEASE INDICATE HOW MUCH OF LIBRARY COLLECTION IS USED IN YOUR
- 15.1 OVER90%USED
 - 15.2 UPTO 90% USED
 - 15.3 UPTO 57% USED
 - 15.4 UPTO 50% USED
 - 15.5 UPTO 25% USED
 - 15.6 LESS THAN 25% USED
16. PLEASE INDICATE WITH YOUR OPINION REGADING THE USE OF VARIOUS TYPE LIBRARY COLLECTION IN PARTICUAR
- 90% 75% 50% 25% BELOW 25%
- 16.1 BOOKS
 - 16.2 MSS
 - 16.3 BOUND PERIODICAL
 - 16.4 . CURRENT PERIODIAL
 - 16.5 REPORT/PATENT/STANDARDS
 - 16.6 MICROFORMS
 - 16.7 COMPUTER READABLE MATERIALS
 - 16.8 ALL ABOVE INDIAN PUBLICATION
 - 16.9 ALL ABOE FOREIGN PUBLICATION

17. KINDLY INDICATE ABOUT YOUR OPINION ABOUT THE CHARGES AGAINST THE SERVICES

17.1 YES

17.2 NO

18. MENTION THE SERVICES FOR WHICH YOU ARE READY TO PAY PROFIT NO-PROFIT -NO-LOSSLOSS

18.1 USER'S EDUCATION

18.2 REFERENCE SERVICES

18.3 LIST OF ADDITIONS

18.4 S.D.I.

18.5 C.A.S.

18.6 REPROGRAPHICAL SERVICES

18.7 TRANSLATION SERVICES

18.8 NEWSPAPER CLIPPING

18.9 SUBJECT BIBLIOGRAPHY

18.10 BOOKS DISPLAY OF PUBLICATION

18.11 INTER-NET ACCESS SERVICES

18.11 ON-LINE LITERATURE SEARCH

18.12 INDEXING SERVICES

18.13 ABSTRACTING SERVICES

18.14 INTER-LIBRARY LOANSERVICES

18.15 CD-ROM SEARCH

18.16 ORIENTATION SERVICE i,e TRAINING COURSE ON USE OF INFORMATION TECHNOLOGY

18.17 PATENTS INFORMATION SERVICES

18.18 NOTIFICATION ABOUT CONFERENCES/SEMINAR/WORKSHOPS

18.19 STANDARDS INFORMATION SERVICES

19. PLEASE INDICATE YOUR OPENION ABOUT SERVICES

19.1 HIGHLY SATISFACTORY

19.2 SATISFACTORY

19.3 NOT SATISFACTORY

19.4 AVERAGE

19.5 BELOW AVERAGE

20. PLEASE INDICATE THE ATTITUDE OF LIBRARY STAFF REGARDING

AGREE DISAGREE

- 20.1 IMPROVES QUALITY OF LIS
- 20.2 IMPROVES EFFICIENCY OF LIBRARY
- 20.3 ENHANCE KNOWLEDGE AND EXPERTISE
- 20.4 MAKES INTEGRATION WITHIN THE LIBRARY
- 20.5 ESSENTIAL TO IMPROVE THE COMMUNICATION
- 20.6 HELPFUL TO OBTAIN RIGHT INFORMATION AT
RIGHT TIME AND THE RIGHT PLACE
- 20.7 IMPROVES THE STATUS OF LIBRARY
- 20.8 DISTURB THE ROUTINE WORK OF THE LIBRARY
- 20.9 REDUCES THE WORK LOAD OF LIBRARY STAFF
- 20.10 TAKES OVER THE TRADITIONAL WAY OF WORKING
- 20.11 SPOIL THE LIBRARY'S IMAGE

21. WHICH OF THE FOLLOWING IT TOOLS ARE AVAILBLE IN YOUR LIBRARY

YES NO

- 21.1 INTER -NET
- 21.2 CD-ROM
- 21.3 REPRORAPHY SERVICES
- 21.4 MICRO-FILMS
- 21.5 MICRO-FICHES
- 21.6 OVER-HEAD PROJECTOR
- 21.7 LAN
- 21.8 COMPUTERIZED DATABASE
- 21.9 BAR-CODE
- 21.10 FAX
- 21.11 TELEPHONE

22. PLEASE TICK THE OPEN ION ABOUT THE FAILURE OF IT

AGREE DISAGREE

- 22.1 LACK OF LIBRARY GRANT
- 22.2 LACK OF ADEQUATE PROVISION OF RECURRING FUNDS
- 22.3 LACK OF INTEREST IN LIBRARY PROFESSIONAL
- 22.4 LACK OF ADEQUATE TRAINED LIBRARY PROFESSIONAL
- 22.5 LACK OF COORDINATION AMONG LIBRARY PROFESSIONAL
- 22.6 LACK OF SUPPORT FROM UNIVERSITY AUTHORITY

- 22.7 LACK OF INITIATIVE BY LIBRARY PROFESSIONAL
- 22.8 LACK OF INTEREST ON THE PART OF LIBRARY USERS
- 22.9 LACK OF SCOPE FOR LIBRARY PROFESSIONAL
- 22.10 LACK OF CAPABILITY OF LIBRARY PROFESSIONAL TO
LEARN NEW INFORMATION TECHNOLOGY
- 22.11 FEAR OF MODERN INFORMATION TECHNOLOGY